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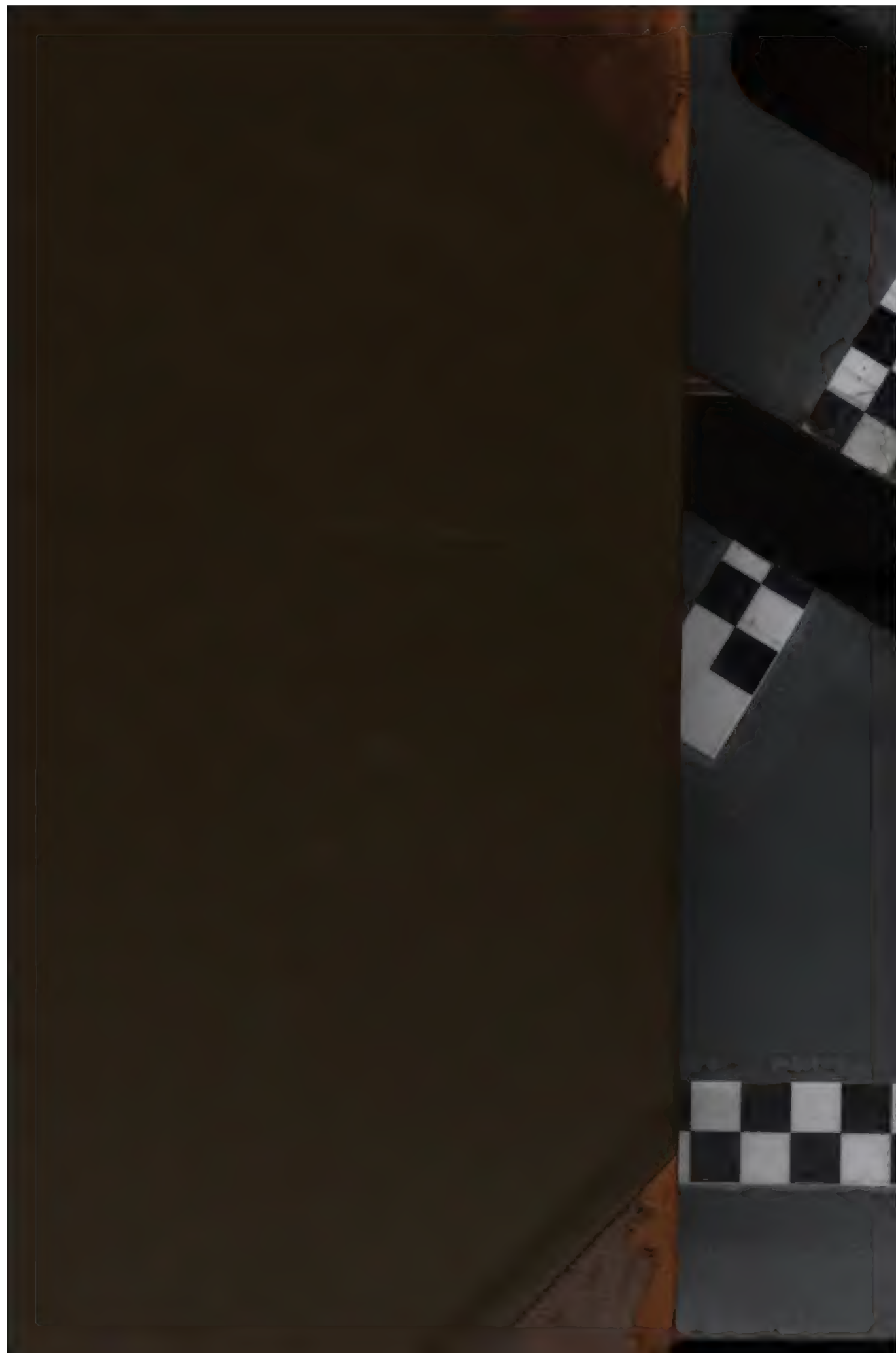
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GENERAL VIEW  
OF THE  
AGRICULTURE  
OF THE  
COUNTY OF HAMPSHIRE

1840

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GENERAL VIEW  
OF THE  
AGRICULTURE  
OF THE  
COUNTY OF HANTS  
WITH  
OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT  
BY ABRAHAM AND WILLIAM DRIBBLE  
OF KENT ROAD, SURREY.

---

DRAWN UP FOR THE CONSIDERATION OF THE <sup>GEORGE</sup> BOARD OF AGRICULTURE  
AND INTERNAL IMPROVEMENT.

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LONDON:  
PRINTED BY COLIN MACRAE;

1794

NEW



S455

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v. 5

no. 1

## TO THE READER.

IT is requested that this paper, may be returned to Agriculture, at its Office in London, with any additions and observations which may occur on the perusal, *margin*, as soon as may be convenient.

It is hardly necessary to add, that the Board does itself responsible, for any fact or observation contained in the report, which at present is printed and circulated, for the purpose merely of procuring farther information, respecting the state of this district, and of enabling every one, to contribute to the improvement of the country.

The Board has adopted the same plan, in regard to the other counties in the united kingdom; and will be happy to afford assistance in its power, to any person, who may be desirous of improving his breed of cattle, sheep, &c. or of trying an experiment in Husbandry.

LONDON, JULY, 1794.



## PREFACE.

WHEN we first undertook to report the state of the Agriculture of the County of Hants, we were not altogether aware of the time and attention it would require, to make a complete and particular statement of the whole county; and we find from experience, the more we investigated the subject, the wider the field expanded to our view. Nevertheless, had our other avocations permitted it, we would with pleasure have entered into the minutiae of every parish in the district, and have made a detailed, and not a general report, on the state of its Agriculture, and the means of its Improvement. But as that was impossible, we must request the Board to accept the following sketch, which is considerably shortened, in consequence of our having been robbed of our portmanteau, &c. containing a considerable number of papers, by some footpads, on our return from the survey. If there should, however, be found any information in the following sheets, that may tend to the improvement of this county, or of the kingdom at large, it will afford us ample compensation



sation, for the trouble and expence we have sustained in the course of making this survey, of which we trust the Board will accept; and if at any future period the Board should have occasion for a further investigation of the subject, we shall be extremely happy to render them all the assistance in our power.

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## COUNTY OF HANTS.

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### INTRODUCTION.

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**HAMPSHIRE** is bounded on the North by Berkshire, on the South by the Isle of Wight and the English Channel, on the East by Surry and Sussex, and on the West by Wiltshire and Dorsetshire. It is a maritime county, has several good sea ports and harbours, and a number of creeks. The principal rivers are the Itching or Abre, Teste, Anton, Avon, Stour, Wey, Loddon, and Auborn.

The air is salubrious and fertile. There are several Roman and other encampments, viz. upon St. Catherine's Hill, near Winchester, near King's Clear; Bere Hill, near Andover; at Edgebury; at Quarley Hill, near Stockbridge; at Dunbury Hill, east of Quarley Hill; at Okebury; at Fripsborough; at Gadshill, near Fordingbridge; at Dunbul, near Stockbridge; at Norbury, near Winchester, near Broughton; at Dunwood, near Rumsey; at Tachbury, near Redbridge, near Lyndhurst; at Barksbury, near Andover; and a Roman amphitheatre at Silchester. The roads are in general very good, particularly in the neighbourhood of the New Forest.

It is sixty miles long, thirty miles broad, and 150 miles in circumference; containing 1481 square miles, or 1,212,000 acres; has one city, viz. Winchester; and twenty market towns, viz. Southampton, Portsmouth, Gosport, Andover, Christchurch, Stockbridge, Lymington, Whitchurch, Petersfield, Basingstoke, Alresford, Alton, Fareham, Havant,

King's Clear, Odiham, Ringwood, Fordingbridge, Ru and Waltham. It contains 253 parishes, 77 vicarages 1062 villages. It is divided into thirty-nine hundreds, has 200,000 inhabitants, sends twenty-six members to parliament, pays fourteen parts of the land-tax, and provides nine hundred and sixty militia.

#### GENERAL OBSERVATIONS.

MANY parts of the County are well wooded, and adorned with a great number of beautiful seats and villas ; but very sorry to observe such immense tracts of open heath and uncultivated land, which strongly indicate the want of power or inclination to improve it, and often reminds the traveller of uncivilized nations, where nature pursues her own course without the assistance of human art ; however, this is by no means singular in this respect, as many other counties are quite as bad, or perhaps worse, particularly the adjacent counties of Wilts and Dorset. But that is no apology for this county ; on the contrary, every county ought to vie with each other in carrying its cultivation, particularly of the lands, to the highest pitch.

In the course of our survey, we found a great variety of soils, but by far the greatest proportion tending to a poor sandy soil, particularly upon the uplands ; nevertheless, there is a considerable proportion of rich land, and water meadows, which are very productive. On the north side, towards Basingstoke, the land is in general deep and a good staple, producing crops of corn, and considerable quantities of oak acorns ; in many places in that neighbourhood, the oak has been originally transplanted, nevertheless is arrived to fine dimensions.

Towards Basingstoke, the land upon the top of the hills is in general very deep, strong land, with chalk underneath.



which produces large crops, particularly in dry seasons, as it never burns. The usual crops are,

1. wheat,
2. pease,
3. oats or barley, with clover;

but saintfoine has lately been introduced, and found to answer extremely well. One field of nine acres, in that neighbourhood, was sold last year for ten pound per acre, when clover produced only between four and five pounds per acre. A considerable quantity of land has been lately inclosed, which increased its value from six shillings to twelve shillings per acre.

The Basingstoke Canal is nearly compleated, and will undoubtedly be of great service to the county in general, and particularly to those estates which lie contiguous to it.

At Odiham a society has been established for the improvement of Agriculture, which has been of considerable service in encouraging it, and if more were instituted, they would be a great inducement to improvement in general.

A very considerable fair is held at Weyhill once a year, which is particularly famous for sheep, and it is supposed that upwards of 140,000 are sold there in one day; the five following days are principally for leather, hops, and cheese.

The day before Weyhill fair, is also a considerable one at Appleshaw, where it is estimated half the above quantity is sold.

The land towards Whitchurch is generally chalky, with a thin staple, but produces good crops of corn and saintfoine. From Overton towards Stockbridge, and from thence to Redbridge, there is a beautiful vale, well covered with water meadows, in general well managed, and in good condition: they let from two pound ten to three pound per acre; these meadows produce from two to three loads of hay per acre, and are generally cut twice.

A large quantity of down was inclosed about five  
ago at Downhouse, which is now worth from five  
twenty shillings per acre.

The land in general in this part of the county is very  
and chalky, with a thin staple, nevertheless produces  
crops of corn, particularly barley. Peat ashes are  
used in this part of the county as a manure, which is  
of great service. A new canal is nearly finished from  
bridge to Andover, which will be very advantageous  
country contiguous to it. Towards Rumsey a much  
fertile country presents itself, being well cultivated and  
interspersed with woods, and hedge-row timber: towards  
New Forest the land changes from a chalk, to a loam  
gravel, and here we find chalk a principal manure, which  
brought ten or twelve miles; of which they generally  
ten or twelve load per acre. Between Rumsey and  
wood, is a considerable part of the New Forest, which  
shall particularly describe under that article.

About Ringwood, the land is in general very good  
well manured, as a considerable supply of horse  
obtained from that town.

Towards Fordingbridge and Downton, there are  
good water meadows, which appear to be well manured.

Towards Christchurch, and adjoining Dorsetshire  
are vast tracts of waste land, covered with heath  
we shall mention more particularly under the article  
"Waste Lands."

In the neighbourhood of Lymington, the land is  
regular, the hills in general poor, and the meadows  
their chief manure is marle and chalk, but sea water  
be introduced to great advantage, by mixing it with  
yard dung, or mould.

Lymington was formerly famous for a number of  
which are now reduced to two or three, being a

earious trade, on account of the unsettled state of this climate.

About Redbridge there are some valuable salt marshes, as the salt water flows up considerably above that town; a large quantity of marle is procured from the new canal, which at present is very reasonable.

Near Southampton there is a great deal of uninclosed land, which if inclosed and cultivated would become good corn land. Towards Winchester and Alresford, the land is high and chalky, with a thin staple, and continues much the same till you approach Alton, where are some considerable beech woods, which run very high and straight; but are by no means profitable, if any interest is allowed for the present stock.

The planting of hops has of late years increased in the following parishes, viz. Bentley, Froyl, Binstead, Hollybourn, Alton, Chawton, Farrington, Silbourn, Kingsley, Great and Little Worldham, Hartley, Maudit, and Shoulden, South Warnborough, Neatham, and Long Sutton; all of which are upon the borders of Surry, and the great repute of the Farnham hops has been the principal cause of the planting in these parishes. Upon the best information we have been able to procure, the whole may be estimated at about 800 acres. Notwithstanding they are in the adjoining parishes to Farnham, yet they have never been able to procure so much at market by 40s. or 50s. per cwt. as those with the Farnham mark, though they are equally good; and the farther from Farnham, the greater the difference in value.

The hop land is in general rented with the farms, but where it is let separate, produces from 50s. to 3l. per acre.

The annual expence per acre, on an average, is nearly as follows:

Labour,

Labour, . . . . .	£
Poles, . . . . .	
Picking, . . . . .	
Drying and duty, . . . . .	
Tythes, . . . . .	
Rent, . . . . .	
Dung, . . . . .	
Taxes, . . . . .	

Total £

The produce from hop grounds will vary upon an average, in this district, may be above 1000 lbs. per acre, which leaves an annual profit of about 1000 lbs. per acre.

Towards Fareham and Warnford the land is much the same, the hills are chalky and pretty much covered with beech woods; near Warnford there are water meadows on the banks of the river which are worth from 30s. to 31. per acre. In this district the lands vary much in value, being worth from 1000 lbs. per acre, and some are worth 20s. There are considerable downs, which are covered with sheep.

Near Waltham is a considerable tract of land called Waltham Chase, belonging to the Bishop of Exeter, containing about 2000 acres that adjoin the sea, which is particularly described under the article of the coast, from thence towards Portsmouth, the country is open, and interspersed with timber and upland in general being stronger and deeper.

There are very few sheep bred in this district, they are mostly brought in lamb from other parts of the county.

which, with their lambs, are fattened for the different markets.

There is a considerable quantity of salt marshes towards the sea, of a fertile quality, which let from 30s. to 50s. per acre.

Towards Petersfield the land is more open, with a considerable quantity of down, some of which is very good.

#### MANUFACTURES, &c.

THERE are but few manufactories of any extent in this county, and those are chiefly of cloth, shalloons, and coarse woollens. It is to be regretted that they are not more general, as the poor women and children would thereby be provided with employment, and of course habituate themselves to industry; whereas at present but little encouragement is held out to them to exert themselves, and but very few poor houses are established for the indigent, which occasions the poor rates to be high in this county. In some few towns Sunday Schools are established, and it is to be hoped others will follow their example, as it will ultimately prove a great national benefit.

#### SYSTEM OF HUSBANDRY.

In the low parts of the county, the system of Agriculture is in general upon the rich lands as follows :

1. Wheat, out of clover ley.
2. Turnips.
3. Barley, with seeds.
4. Mowed.

It is not uncommon to take a crop of pease before the wheat. The average produce is about

- 32 Bushels of wheat, per acre.
- 32 Bushels of barley, and
- 30. Cwt. of seeds, per acre.

Wheat

Wheat is generally sown the beginning from two bushels and a half to three bushels, the beginning of April, about four bushels, and about ten pounds of red clover, and one per acre.

If the land laid down is intended for pasture of rye-grass, twelve pounds of white Dutch clover, and twelve pounds of red clover, are generally sown upon these lands the ewes are brought upon poorer soils to fatten.

Of late years, saintfoine has been much answers extremely well for the high chalk lands, the mode of cultivating it is as follows:—In the first year, two bushels and a half are sowed per acre, the second year only four bushels and a half are sowed, it does not think answers so well, as it thereby produces a coarse, and thick stalked, for sheep, which is a considerable waste, as they only eat the tender part, it is but in middling condition, it will last three years; but if in good heart, will continue to produce, during that period, from two to three cwt. per acre. The seed is generally sown in the autumn and is worth from 40s. to 48s. per quarter.

After the saintfoine is worn out, the land is divided into shares, which is performed as early as possible, by a man with a breast plough, and a horse before him, thereby cutting the turf, and the land which it becomes dry, and is afterwards burnt, and cut about twenty-six rods per day, and when the land is about twelve shillings is given for cutting, and about twelve shillings for drying, burning, and spreading, that which is done early is sown with wheat, and fed off early, and then sown with wheat, and the land which is kept for the ewes and lambs in winter, and the land which is divided is sown with wheat the following

ley and seeds ; lays two years in seeds, and then oats with once ploughing ; the following year turnips, and then barley and seeds as before.

The best and firmest strong land, is sown with two crops in four years, viz. wheat, barley with seeds, lays one year, and the following year fallow for wheat.

The hills produce, on an average, wheat, sixteen bushels per acre, barley, twenty-two bushels, and oats, twenty-four bushels per acre. They generally sow wheat the beginning of October, from three and a half to four bushels per acre ; oats the beginning of March, six bushels per acre ; barley the latter end of March, four bushels and a half per acre ; rye-grass two bushels, and six pounds of trefoile, per acre.

The bottoms, between the hills, are in general of the best quality ; sown with wheat after fallow, with three or four ploughings, and the following year with beans ; then a fallow one year, and then wheat : the average produce of wheat is about twenty-two bushels per acre, of barley and of oats thirty bushels, and of beans twenty-four bushels per acre.

To prevent the smut, the wheat in general, in this county, is steeped in chamberlye, or salt and water, about twelve hours, and lime sifted over it, to dry it previous to sowing.

The size of the farms in this county vary much, the most predominant are from 200l. to 300l. per annum.

It may not perhaps, be improper here to give the mode of cultivating a farm of 300l. per annum, and the quantity of stock generally kept, viz.

400 Acres of arable, at 12s. per acre	£240	0	0
100 Acres of down, at 3s. . . . .	15	0	0
30 Acres of meadow, at 30s. . . . .	45	0	0

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£300 0 0

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- 200 Acres of the above are sown with corn.
- 100 Acres, with seeds.
- 100 Acres fallow and turnips.

The stock kept is 300 ewes, eight cows, and 12 horses.

On the strong land, in this county, a two-wheeled plough is mostly used, with four horses, for the summer fallow; for turnips and light ploughing, a single wheeled plough is frequently used with two horses, and occasionally with four horses.

On large farms three large harrows, with six horses abreast, are used; on small farms, four small harrows with four horses abreast.

A nine-share plough is frequently used for the open land, in order to make furrows for wheat before sowing with four horses double; this is also found very useful for backing in barley which was ploughed after wheat, in autumn, and then only with this nine-share.

A plough has lately been invented by a Mr. Sparrow, which he has a patent. It is much used in the neighbourhood of Fareham, Wickham, and Portsmouth. It is very light, and the whole, except the handle and beam of iron, the share is of cast iron, and will plough from twenty acres, and is exchanged for eight-pence. It is a considerable saving, as one horse in four will be saved.

In the course of our survey of this county, we have observed but a very small proportion of drill husbandry, we cannot refrain from recommending to be generally practised, particularly upon light land, as it is thereby kept clean from weeds, and a considerable quantity of seed (one fourth) is saved in sowing; and in nearly all the experiments we have seen, the advantage in the produce has been considerably in favour of drill husbandry. In many cases also, dibbling would answer.



**MANURES.**

ON the sea coast, sea sand and mud might be used to great advantage, if properly managed, and without which it is of very little service to the land. It should be mixed with chalk or loam, and turned over two or three times in the course of a year, when the vegetative parts will be properly incorporated and sweetened, and will then be found of great service as a manure for most lands.

Sea weed, is best spread over the land as soon as it is collected, in the proportion of about twenty cart loads to an acre.

There is on the sea coast, near Emsworth and Havant, a fine marle, that is found to improve the deep land very much.

**WATER MEADOWS.**

THIS county is particularly famous for water meadows, which are extremely productive, and in general very well attended to. The farmers seem aware of the great advantages arising from them, as in many instances they are at considerable expence in purchasing a supply of water, besides the first expence, which is from five to six pound per acre, exclusive of the continual repair of the sluices, &c. They are usually shut up in November, or the beginning of December, and are watered alternately every other week, till the beginning of March, when they are fed for about five or six weeks with ewes and lambs, and one acre will carry four or five couple, which are frequently taken in at six-pence to eight-pence per couple per week, and the water turned on as before, till they are fit to be mowed, when in general they produce from two to three loads per acre, and are frequently cut twice in a season.

In the course of our survey, we observed many instances where water might be caught from the hills or roads, and turned on the adjoining lands to great advantage, and in some measure would answer the purposes of water meadows, as the water falling therefrom, carries with it a considerable portion of vegetative salts.

#### LABOUR.

THE price of labour is generally as under, throughout the county, viz.

	L.	s.	D.	L:
Head Carter from . . . .	7	7	0	to 10 per a
Under ditto . . . .	5	0	0	. per annum
Shepherd . . . . .	10	10	0	. ditto.
Upper Shepherd . . . .	5	0	0	. ditto
Milk Boy . . . . .	2	2	0	. ditto.
Upper Maid servant . .	4	0	0	. ditto.
Under ditto . . . . .	2	10	0	. ditto.
Reaping and binding wheat .	0	6	0	. per acre.
Mowing and cocking barley } and oats, }		2	0	
Day labourers, 7s. to 8s. per week				

#### PROVISIONS.

Beef is sold from - -	4d to 5d per lb
Mutton - - - -	4½d to 5½d per lb
Veal - - - -	4½d to 6d per lb
Butter - - - -	9d to 10d per lb
Fat hogs, about -	8s 6d. per cwt

TEN

## TENURES.

In this county a considerable quantity of land is held under the Bishop of Winchester, as well as under the Dean and Chapter, upon lease for twenty one-years, renewable every seven, which is a very great bar to improvements in agriculture, as the fines upon renewal are always increased, in proportion to what improvements have been made.

A considerable quantity of land is also held upon three lives, and though it is now the custom in many places, for the lords to let the lives run out, yet it is much against their interest so to do, upon a fair calculation ; as, when the lives all drop, the land is generally in very bad condition, and the buildings very much out of repair. It is frequently out of the power of cottagers, and others, to raise money to pay the fine for putting in one or two lives. It would be much to the interest of the lord of the manor, to reduce the fines, and increase the reserved rents, which would much benefit his estate, as the rent may generally be increased much more than the value of the fine.

In some parts of this county, it is usual, in leases, to insert a clause, for a certain quantity of the land to be left one year lay, and a certain quantity two years lay, generally about one fifth of the farm.

They are principally Michaelmas farms, and the new tenant enters upon part of the land the first of January, and the first of May, preceding the end of the lease, in order to prepare for wheat and turnips ; in a farm of 500 acres about thirty acres the first of January, and about seventy acres the first of May ; a certain quantity of saintioine is also to be left, and paid for by the new tenant.

Some leases are made to expire at a certain time, or at the death of the tenant, which is a great bar to improvement ; particularly when the tenant is advanced in years, as his fa-

family of course expect an increase of rent at proportion to the improvement that has been made; the son will have to pay extra for his father's *Perhaps a lease for a life, and for five or seven years, might not be liable to the same objection,*

#### SHEEP.

WE are now going to treat upon a subject of consequence in a national point of view, for it is admitted by all, that sheep, and their produce, are the support of the three leading resources of this Kingdom, Agriculture, Manufactures, and Provision. In Agriculture, we can scarcely produce a crop of corn without the aid of sheep, particularly in poor land, and it is generally the greater the stock of sheep a farmer can winter on his farm, as well as himself, will improve. In Manufactures, wool is considered as the staple of this kingdom, and very properly so, for it is almost wholly the produce of our soil: it furnishes employment for an immense number of the poor, and the whole class of people, and also the merchant, and the trade. It is, therefore, highly necessary every encouragement should be given to the improvement of the breed in a few years, if properly attended to, would supply the purposes of foreign wool for our own market, and thereby enable us to undersell at foreign markets. In Provision, the produce of sheep is beyond all doubt necessary in every city, town, and village, in the kingdom, and without which, this nation would have found a great scarcity of animal food.

Having thus pointed out some of the great uses arising from sheep, we shall now enter more particularly into the subject, as relating more particularly to the

The original Hampshire sheep is horned, and for the most part with a white face, though some few have speckled faces; they were formerly long-legged and narrow, but are now much improved, and are short legged and well carcassed; they are an excellent kind for fattening; their wool is also much improved.

In some parts of this county, the South Down sheep have been introduced, and found to answer extremely well, as three can be kept instead of two of the Hampshire sort. The present average of the weight of wool is about ten fleeces to a tod, and the average weight of ewes about nine stone, and wethers about eleven stone, but they vary in different parts of the county.

Hampshire lambs have for several years past, at Weyhill fair, sold for more than any other breed; the rams are frequently sold for thirty guineas each.

Hampshire is considered as a great breeding county, and the stocks in most parishes are very large, although they are supposed to be reduced one-third, on account of the downs having been broken up, and the inclosures which have lately taken place. The following is a particular account of the stock in the following parishes in this county, which may afford some information to the Board upon that interesting subject.

East Meon . . . . .	3,000	West Tisted . . . . .	800
Porchester . . . . .	400	East ditto . . . . .	600
Wymering . . . . .	1,000	Winchester . . . . .	2,000
Froxfield . . . . .	1,000	Chilbolton . . . . .	2,000
Berryton . . . . .	2,100	Twyburton . . . . .	3,000
Clanwell . . . . .	1,200	Compton . . . . .	1,800
Callington . . . . .	500	Stoke Chanty . . . . .	1,600
Warnford . . . . .	1,200	Mitchel Dover . . . . .	4,000
West Meon . . . . .	1,000	Stratton . . . . .	1,000
Privett . . . . .	600	West Stratton . . . . .	600
			North-

Northington . . . . .	600	Tufton . . . . .	
Swallington . . . . .	500	Whitchurch . . . . .	
Waltham . . . . .	2,500	Woodcot . . . . .	
Upham . . . . .	1,000	Bulington . . . . .	
Droxford . . . . .	2,500	Stockbridge . . . . .	
Kilmerton . . . . .	700	Autin . . . . .	
Cherryton and Binyon . . . . .	2,000	Kingsnabourne . . . . .	
Titchbourn . . . . .	1,000	Litchfield . . . . .	
Andover . . . . .	5,000	Quarley . . . . .	
Clapworth . . . . .	1,000	Asley . . . . .	
Goodworth . . . . .	1,000	Greatley . . . . .	
Abbotshard . . . . .	1,200	Little Sambourne . . . . .	
Minster . . . . .	2,000	Fawley . . . . .	
Truckston . . . . .	500	Hursley . . . . .	
Kimpton . . . . .	1,600	Worthy's . . . . .	
Weyhill . . . . .	200	Ditto . . . . .	
Shipton and Snidding-		Ditto . . . . .	
ton . . . . .	2,000	East Woodhay . . . . .	
Lower Tidworth . . . . .	1,300	Aslamansworth . . . . .	
Clandvill . . . . .	400	Highclear . . . . .	
Ponton . . . . .	700	Berkeley . . . . .	
Inham . . . . .	350	Newtown . . . . .	
Usband Terrant . . . . .	1,500	Crookseaton . . . . .	
Bourn . . . . .	4,000	King's Clear . . . . .	
Usband Prier . . . . .	1,100	Freefolk . . . . .	
Long Parish . . . . .	1,800	Oakley . . . . .	
Barton Stacey . . . . .	3,000	Overton . . . . .	
Crawley . . . . .	1,200	Ash . . . . .	
Foxcot . . . . .	500	Sutton Scotney . . . . .	
Wearwell . . . . .	2,000	Dean . . . . .	
Leckford . . . . .	1,300	Hannington . . . . .	
Longstock . . . . .	1,500	Wolverton . . . . .	
Wallop . . . . .	2,000	Elwhurst . . . . .	
Ditto . . . . .	2,000	Linkenholt . . . . .	
Wonsen . . . . .	3,000	Wotton St. L.	

Worton . . . . .	600	South Warnbro' . . . .	700
Basingstoke . . . . .	1,400	Weston Patrick . . . .	600
Clidsden . . . . .	1,000	Ditto Corbet . . . . .	700
Farley . . . . .	500	Shalledon . . . . .	1,400
Dummer . . . . .	1,200	Larksam . . . . .	750
Preston Candover . . .	2,000	Bentworth . . . . .	700
Nutley . . . . .	700	Herread . . . . .	800
Ellerfield . . . . .	600	Waltham . . . . .	700
Tuxworth . . . . .	500	Popham . . . . .	600
Basing . . . . .	600	Chiltern Candover . .	1,000
Two Sherborns . . .	1,200	Brown ditto . . . . .	800
Nately, Shewers, and		Tetford . . . . .	600
Aswell . . . . .	500	Woodmancot . . . .	800
Mapledon Well . . .	500	Hartley, Wintery, and	
Up Nately . . . . .	500	Etheringham . . . .	2,500
Grewell . . . . .	600	Exton . . . . .	600
Upton Grey . . . . .	1,000		

The following places chiefly buy lambs and ewes to fat, and sell both afterwards :

Fareham . . . . .	1,500	Wickham . . . . .	500
Titchfield . . . . .	3,000	Farlington . . . . .	200
Alvertoke . . . . .	800	Bellhampton . . . . .	700
Ronner . . . . .	200	Havant . . . . .	500

From the the best accounts we have been able to get, we conceive the number in the whole county to be about 350,000 ; from one-third to one-fourth of these are tags, kept for the supply of the stock. The lambs are put to the ram, at the Michaelmas twelvemonth after they are lambed ; they are kept to breed when two, four, and six, toothed. The full-mouthed ewes, are regularly drawn out about the middle of August, and put to the ram, in order to get forward, for the graziers in the rich lands of this and the adjoining counties.

The wether lambs are sold off about Michaelmas to parts. Most of the upland farmers follow this mode.

Ewes begin lambing early in February; they are fed with turnips, grass, and vetches, till the weaning time, when they are weaned and turned upon the downs with the young. But few house lambs are raised in this county.

The ewes generally fetch from sixteen to twenty shillings each, if well kept, and the lambs from ten to twelve shillings each.

Folding is generally practised in the upper part of the county, but not so much in the lower parts.

It is a common practice, in the low parts of the county, for the farmers to take in sheep to winter, at about 10 shillings per head, from Michaelmas to Lady-Day.

In some parts of this county the sheep are subject to the rot, which has hitherto been almost certain destruction to them; it is generally occasioned by land which produces spongy grass. In the course of our survey we were informed by Mr. Thomas Fleet, of Moundsmere farm, near Bath, whose cure for that destructive malady has been under the consideration of the Board. Nothing could be more valuable than to find an effectual remedy for that disorder. We have been informed, that upwards of a million of sheep annually die of the rot in this kingdom, and that last year more than double that number were destroyed by this fatal disease.

#### HORSES.

THIS county is not remarkable for the breeding of horses. The farmers in general breed their own teams, but not for the saddle. A great number of horses are bred upon the forests, where but little care is paid to their shape or size, as they run promiscuously together; and from the barrenness of the soil, for want of proper nourishment, they are extremely small, having scarcely



to feed on but heath, from which they have very properly derived the appellation of *heath croppers*.

#### COWS.

THE breed of cows, in Hants, is in general very indifferent. The Welch breed has been introduced of late, and found to answer very well; but as there are few dairies in this county, very little attention is paid to the breed, which ought to be the first object, as most probably inclosures will become more general, when a great quantity of the rich land will be found to make excellent dairy farms.

#### HOGS.

THIS county is particularly famous for hogs. The farmers encourage the largest sort, as most profitable for large families. The hogs in the neighbourhood of the forests, feed principally upon acorns and beech mast, which has given them a superiority over most others in the kingdom; they weigh from sixteen to forty score. They used formerly to make bacon, but of late years they mostly pickle it down in large tubs, and let it remain there a year before it is used, by which means it becomes more firm, and goes farther. The usual mode of pickling it is as follows. They take out all the bones and lean, and pickle only the fat, which is from four to six inches thick; to a hog of twenty score, they put about three pecks of salt, and a quarter of a pound of saltpetre. The servants of farmers are generally fed with the pork and pudding the greatest part of the year, except on Sundays, when a joint of meat is sometimes allowed. Great quantities of potatoes have lately been raised, which, when boiled and mixt with barley meal or pease, but not otherwise, are excellent food for hogs.

## DRAINING.

A GREAT deal of good land in this county, is much for want of being properly drained, and although the cost of doing it properly, is rather considerable, yet it pays it in the end. It is a common practice, to throw arable land into narrow ridges, which is certainly of service; but as the water, in that case, runs upon the surface, it is not near so effectual, as when below the reach of the plough. We shall therefore recommend the Essex draining, so generally practised in that county, and performed in the following manner.

The usual method is, first of all to consider the convenient places for the master drains, which are to be made of a great number of smaller ones, and of course should be made obliquely on the slope of the hill; they are always contrived, that the lower end falls into a ditch or sewer, into which the smaller drains, which communicate with them, should be made to fall in an oblique direction across the hill, so as to catch the springs as they trickle down. The master drains are about two foot deep, and reduced at the bottom to about two inches and a half, which is well cleaned out with a narrow scoop, and the bottom filled with brush, and some larger wood upon that, and then straw or rushes. The smaller drains are made upon the same principle, but that they are only eighteen inches deep.

In those parts of the county where stone is plenty, it should certainly recommend it in preference to brush, as it will last for ever. In some parts of this county where it is convenient, it may be done from six pence to one shilling per rod, according to the length of carriage.

*WASTE LANDS.*

WE cannot take this subject into consideration, without expressing our astonishment, that century after century should be suffered to elapse, without some efficient measures being taken to cultivate the waste lands of this kingdom, particularly those belonging to the Crown, when it is a very clear case, that if they were properly managed, they would produce sufficient to pay a very considerable part of the interest of the national debt. In treating upon this subject, we do not mean to confine ourselves to this county, as the same argument will hold good in every part of the kingdom, and although there is a vast quantity in Hampshire, yet we apprehend more will be found in other counties, particularly in the adjoining county of Dorset, which now literally produces nothing but heath, besides the downs, which are but little better. Surely, then, it is a national consideration, and no more time ought to be lost, without pursuing such means as will obtain so desirable an end, the execution of which, does not appear to us to be attended with many difficulties; indeed none but what may be easily surmounted.

A general Act of Parliament, empowering Commissioners to adjust the rights of individuals, and make allotments accordingly, as in common inclosure bills, the whole management of which might be under the Commissioners of the Land Revenue, who are fully competent to the subject, having already Surveys and Reports upon most, if not all, the Crown Lands and Forests in the kingdom. As soon as private claims are adjusted, the remainder, of course, will belong to Government; and it requires very little argument to prove, that it will produce an immense income to the nation, for there is scarce an acre but will produce something considerable. The richest may be applied to agriculture, and the rest for planting. Land, in its present  
state

state not worth a shilling per acre, will produce which, if only reckoned at fire wood price, will be a wonderful profit; but they will produce much more. We ascertain, from repeated observations and experience, that fir of English growth is nearly as good as foreign fir for uses, such as joists, rafters, girders, &c. which are in great consumption. We do not expect to produce much of deals, but those are a very small part in comparison of the whole. Surely, then, if we can supply ourselves with the poorest land, with a sufficiency of fir timber for our own consumption, without being at the enormous expense of importing it from abroad, we are guilty of the greatest error in not doing it, and more particularly, as we do not get hard goods, but hard cash in lieu of it, which must all be drained to this country.

What we have hitherto said upon this subject applies to the waste lands belonging to Government. We will now briefly state our opinion on that which is private property, of which there is an immense quantity throughout the Kingdom. The same argument will nearly apply to the other, excepting that it is, in general, private property. In which case, the general observation is, that it is a thing when inclosed. This argument may hold good when applied to agriculture, but cannot with respect to the waste lands, as we can easily prove, that each acre, at the end of five years, will yield at least 100l. worth of timber. If the wood, supposing the whole cut down at that period, is properly thinned, the remainder will continue to yield at the same proportion. We should therefore hope, that the advantages arising therefrom, would be a sufficient inducement to gentlemen possessing that species of property to improve it upon an extensive scale; indeed, we cannot expect any gentleman can sit down easy, and say he has done his duty to his family, when he is conscious he has neglected to pursue those measures, which, in a few years, will increase his property so amazingly.

Under this article we shall mention commonable land, which belongs to the parishioners in general, which being uninclosed, may be considered as very little better than the waste land before mentioned, as it is self evident, that cultivated land will produce more than that which is totally uncultivated, and left for nature to pursue her own course; and with this disadvantage, that each one is endeavouring to exhaust it of every valuable production, without paying the least attention to its support and improvement. The very staple itself, does not even escape its ungenerous neighbour. All this would be easily remedied by a general inclosure bill, which would reduce the expence of inclosures, and would be a spur to that improvement. Perhaps it may be said, that inclosing commons, would decrease the number of sheep, and thereby injure the produce of wool; but this objection will not hold good, when it is considered, that every acre of land that is cultivated, will produce double the number of sheep or other cattle, than that which is not cultivated; and we apprehend, there are few farmers, but what are already convinced, that the greater the number of sheep they can conveniently keep, the more advantageous it is to themselves; and of course, if there is a greater quantity of land cultivated, the greater will be the stock of sheep, as well as of other cattle.

The following are the principal waste lands in the county of Hants, exclusive of the forests, which are particularly described in this report.

East Woodhay, near Newbury, contains about 1200 acres; it is principally fed with young cattle, and some few horses are bred there, but the horses are of little value; a few good cows, however, are bred.

This would make good arable land, and some part good meadow; if inclosed would be worth about 7s. 6d. per ann. At present it is of very little value, as there is no timber. The Bishop of Winchester is lord of the manor.

King's

King's Cleeve contains about 1000 acres, upon which cattle of a good sort are now bred. If this were made good convertible land either for the sheep or for feeding, but principally for feeding, and would be worth about 15s. per acre.

There is a considerable quantity of waste lands in the above commons, which continue through the county towards Berkshire.

Froxfield Barnet Common, containing near 1000 acres at present produces very little, but if inclosed would be worth 8s. or 10s. per acre. The parishioners have desired to have it inclosed, but upon application to the lord of the manor, who has the great tythes, he refuses to give an allotment of land in lieu of these tythes, for which the inclosure, at present, we understand, is dropt.

At Botley, near Southampton, is a considerable quantity of land, about 7000, or 8000 acres, of which a great part is very useful land for cultivation, and some parts are plantations of firs, timber, and underwood. It now produces very little, but if inclosed would be worth about 10s. per acre.

Waltham Chase contains about 2000 acres, belonging to the Bishop of Winchester, which, if properly managed, would produce a great quantity of fine timber; and a considerable proportion would make fine pasture and good land, which would be worth at least 20s. per acre. There is also a considerable quantity of good corn land, which would be worth from 10s to 12s per acre.

Bagshot Heath contains a very considerable tract of land, the greater part of which is in Surry: upon a rough estimation, between 2 and 3000 acres may be in this tract, which is principally of a very light sandy soil, and produces very little. If plantations of firs were made, they would grow well, and become profitable.

The total quantity of waste lands in Hants, exclusive of the forests, but including 5,675 acres in the Isle of Wight, is supposed to be 104,845 acres.

## TYTHES.

THIS is a subject of great national importance, and which, if properly adjusted, would prevent much discontent on both sides, which is now daily the cause of disputes and litigation. If the clergyman, or lay proprietor, agrees to take a commutation in lieu of tythes, there is great difficulty in ascertaining the value; and if he take it in kind, that is a still greater evil, and causes the clergyman and the farmer to be continually at variance, who, on the contrary, ought to live in the utmost cordiality; for it cannot be expected, that much good can be derived from the advice of the pastor, when at variance with his flock. There are doubtless numerous instances where perhaps both parties are to blame, in striving to aggravate each other. We will mention one instance in a parish in this county, which happened last autumn, where tythes were taken in kind. The clergyman and the farmer were at variance, and the farmer, determined to be even with the clergyman, gave him notice that he was going to draw a field of turnips on a certain day. The clergyman accordingly sent his team and servant at the time appointed, when the farmer drew ten turnips, and desired the other to take one of them, saying he should not draw any more that day, but would let him know when he did. This, among many other instances, only proves how desirable it would be to have some plan adopted to prevent these evils, and thereby remove the excuse for complaint in the occupier, and at the same time render the lives of the clergy much more peaceable and happy. However, in justice to the clergy, we cannot omit saying, we have found much more severity in lay impropiators than in the clergy.

At all events, it is our opinion that the clergy, or lay proprietors, should have nothing to do, either with the valuing or levying the tythes, but that it should be done by disinterested persons; and although this is a subject that has excited the attention and ingenuity of a great number of people, we

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cannot

cannot pass it by, without suggesting our ideas on this occasion. We shall therefore take the liberty to propose to the Board, whether this complicated and unpleasant system might not be simplified and adjusted to the satisfaction of the farmer, if tythes were to be regulated by the rent of the land, which could be always easily estimated in almost any parish, either from the taxes, or by assessors; and which might be settled at nearly the following proportions.

One fifth of the rent upon Arable

One ninth ditto, . . upon Meadow.

One twelfth ditto, . . upon Pasture.

However the exact proportions might be determined by a thorough investigation of the subject, we cannot but think that in pursuing this would be attended with considerable benefit to the farmer, who would thereby reap the immediate benefit of his own expences and improvements, a consideration which now goes to the proprietor of the land. It will ever continue to be a great bar to improvement, if our plan were pursued, the value of the tythes would gradually increase in proportion to the rent, which is always known when the farm is taken, and the farmer would have no reason afterwards to complain, and during his life would have the satisfaction of reaping the benefit of his own labour and improvement, without the mortification of seeing (under the present system) a considerable part of the produce of his land taken from every load of dung or other manure he has taken from him.

### FORESTS.

THERE are several considerable forests in the county, viz. the new Forest, Alice Holt, Woolmer, and Farnham. We shall describe separately, beginning first with the new Forest, which is by far the most extensive.



## NEW FOREST.

THE New Forest is situated on the south side of Hampshire ; it was formerly bounded on the east by Southampton River, and on the south by the British Channel, being near thirty miles in length, and ninety in circumference ; but since the disafforestations by Henry the Third and Edward the First, its boundaries are much reduced, and now only extends from Godshill, on the north-west, to the sea, on the south-east, about twenty miles ; and from Hardley, on the east, to Kingwood, on the west, about fifteen miles ; containing within those limits about 92,365 acres, the whole of which does not now belong to the Crown : as several manors and freehold estates, to the amount of 24,797 acres, are private property ; about 625 acres are copyhold, belonging to his Majesty's manor of Lyndhurst ; 1004 acres are leasehold, held under the Crown ; 902 acres are encroachments ; 1193 acres are held by the master-keepers and groom-keepers, attached to their respective lodges ; and the remaining 63,844 acres are the woods and waste lands of the forest.

In all the freeholds subject to the regard of the forest, which are of the nature of purlicus, the Crown reserves certain rights.

The copyholds within the manor of Lyndhurst entirely belong to the Crown, and are granted to tenants by copy of Court Roll, according to the custom of the manor. The timber on this manor is also the property of the Crown. The leasehold estates in this forest are entirely the property of the Crown.

There are a considerable number of encroachments, chiefly made by poor people, excepting those which the proprietors of neighbouring estates have added to their own, all of which the Crown has a full power to lay open again.

The New Forest is divided into nine bailiwicks, which are subdivided into fifteen walks, viz.

BAILIWICKS.	WALKS.
Burley Bailiwick . . .	{ Burley Walk, Holmsley Walk.
Fritham ditto . . . . .	{ Bolderwood Walk, Eyeworth ditto.
Godshill ditto . . . . .	Ashley ditto.
Lynwood ditto . . . . .	Broomy ditto.
Battramsley ditto . . .	{ Rhinefield ditto, Welverly ditto.
South ditto . . . . .	{ Whitley Ridge ditto, Lady Cross ditto.
East ditto and the Nodes	{ Denny Walk, and Ashurst Walk.
Inn Bailiwick . . . . .	Ironshill ditto
North ditto . . . . .	{ Castle Malwood ditto, Bramblehill ditto.

The officers of the Forest are, a Lord Warden, Riding Forester, Bowbearer, two Ranger Ward, Under Wood-Ward, four Verderers, Steward, Under Steward, twelve Regarders, Verderers or Master Keepers, and thirteen Under Warders or Groom Keepers. Besides the above officers, there is a Surveyor-General of the Woods and Forests, who appoints a Deputy, and a Purveyor of the Navy, who are not properly officers appointed solely for the Forest; the Surveyor General being superintendent of the forests; and the Purveyor of the Navy is paid by the Board as an officer of Portsmouth Dock-yard.

It does not appear to us necessary to mention the duties of each officer, but we are warranted in saying much, that if each officer were to do his duty, considering his private emolument, it would tend to the benefit of the Forest.

Increase and preservation of the timber in this forest; whereas on the contrary, it is certain, that the interests of all the inferior officers so clash with that of the forest, that it is in vain to expect either a preservation of the timber now growing in the forest, or an increase from new plantations, while the present system remains, as it clearly appeared to us from the Survey we made of the New Forest in 1787, by order of the Commissioners of the Land Revenue, that the principal care of the timber, and inclosures for its preservation, depended chiefly upon the Under-Keepers, whose emoluments are mostly derived from deer, sale of browse-wood, rabbits, and swine, all of which are inimical to the preservation and increase of timber; and the evil consequences of these emoluments being allowed instead of an adequate salary, are very conspicuous.

In the first place, the forest is so overstocked with deer, that upwards of three hundred died in one walk in 1787. With respect to the cutting of browse-wood, it admits of many depredations, such as cutting away the holly and thorn, the great preservation of the young oak, and too often the oak itself is included in the fall.

With respect to rabbits, they are encouraged in almost every walk, but particularly in those of Welverly and Rhinefield, where three inclosures, made for the preservation of timber, have been converted into warrens, to the amount of 835 acres; and with respect to swine, some of the keepers are considerable dealers in them, which are suffered to continue in the forest during the whole year. One of the keepers only, had between seventy and eighty swine at one time.

All these circumstances concur in the destruction of young timber, and unless some means are taken to prevent these and other abuses, in a few years there will be no timber worth mentioning left upon the forest. As it appears from  
actual

actual surveys made of the timber at different periods, how much the timber has decreased, and what the forest was formerly capable of producing, which account we shall have the liberty of subjining.

Date of survey.		Number of trees.	Number loads.
1608	Timber fit for the navy	123,927	197,42
	Dotard and decayed trees	number not mentioned.	118,07
1707	Timber fit for the navy	12,476	19,82
	Dotard trees not stated		
1764	Timber fit for the navy	19,836	36,66
	Defective oaks - - - -	1,743	3,82
1783	Timber fit for the navy	12,447	19,82
	Defective oaks - - - -	596	1,00

From other accounts, it appears that the Navy was supplied with about 885 loads of oak timber per annum, on an average, from this forest, for the last twenty years; and that the only produce to the public. The annual expense of the forest appears to be about 3400l. per annum, and the clear profit, about 1,015l. on an average; therefore that all the timber in the New Forest growing on 10,000 acres of land, has produced a profit only of 1,015l. per annum, on an average, for the last twenty years, without making any allowance for the deficiency in the present stock compared with the stock twenty years ago, on the same land.

Having thus pointed out the improper management of the forest, it may be expected we should endeavour to plan for its improvement; we shall therefore take the liberty to suggest our general ideas upon that head.

There being in the New Forest a variety of privileges appertaining to different people, it would be necessary to ascertain them previous to any final arrangement made; we should therefore recommend an act of

empowering Commissioners to make inquiry into the nature of their respective claims, which should be paid them in land or money, as the particular circumstances of the case may require, which may be valued by a jury of freeholders in the county; and on the other hand, to ascertain and value the rights of the Crown in respect to the copyholders, and the encroachments upon the forest; all of which being properly adjusted, it will be easily known what part belongs exclusively to the Crown, excepting the right of common of those who reside in the neighbourhood; and as there appears to be about 64,000 acres of wood and waste lands, it may be fairly presumed, that if Government were to agree to give up certain privileges, and to destroy or park the whole of the deer, which are now extremely numerous, and injurious in a great degree to the adjoining lands, it would be giving up a very considerable right, which, though not very valuable to the Crown, is highly detrimental to the waste lands, and as the Crown has already a right to keep constantly inclosed 6000 acres, (by an act of William III.) for the growth of timber, and of course a very considerable share in the right of common.

It has been suggested on a former occasion, that if 20,000 acres were to be kept constantly inclosed for the growth of timber, it would be a very moderate consideration for giving up so many other privileges; however, the quantity might be settled by the Commissioners and the Jury. This being ascertained, it only remains to point out the best method of fencing and planting the inclosures, and preserving them till they are out of danger of being injured by cattle; to accomplish which we should recommend the external fences to be made with a ditch, and posts with three rails on the bank, and well planted with white thorn hedge on the inside. We would then recommend a nursery to be made in a central part of the forest, for raising the several kinds of plants adapted to the various soils of the New Forest, and a person conversant

in that branch, appointed to superintend the manage-  
 who should reside upon the premises, and attend to  
 the raising of the trees, but to the transplanting them  
 wards in the particular situations where they are to  
 remain, as their success depends much upon that.  
 but perhaps it may be urged, that it will be unne-  
 raise plants in a nursery, when the inclosures may  
 with acorns, &c. which is certainly much less trouble  
 when applied to oak only, is the most expeditious  
 furnishing a large quantity of ground with young trees.  
 it does by no means follow, that it is the most com-  
 way of raising timber for the Navy, as from repeated  
 riments and observations we have found, that transplanted  
 will thrive faster, and produce better timber in the end  
 than that which has never been transplanted; and con-  
 standing this is contrary to the generally received opi-  
 have ventured to assert it from known facts, which are  
 ready to prove to any gentleman, and which we should  
 would tend to remove the prejudice that has gotten  
 into people's minds—that if the tap root of the oak is  
 or injured, that the tree will never thrive after; whereas  
 the contrary, two or three tap roots will generally  
 in its stead, which affords them a better opportunity  
 ing out the good earth, and in case one of them is  
 stopped by a stone or otherwise, the others may be  
 fortunate, which is not the case with a single tap,  
 probably this may account for the superiority of  
 planted trees.

However, at all events, if the inclosures could be  
 with oak, without the assistance of the nursery, it  
 not with many other kinds, particularly fir and larch.  
 most of the inclosures would contain some barren  
 the hills, it would be highly improper to plant it  
 which would never succeed, whereas it would pro-  
 duce excellent fir and larch timber, which would pay better

and at the same time supply the neighbouring country with fire-wood, which, under the present system, will soon be very scarce, and not sufficient for the legal claims for that article.

With respect to the number of officers necessary to superintend the forest, after it is properly regulated, it may not be necessary to particularize here; but we may just mention that a very few, under a competent Board, would be fully sufficient for the whole management, and those should be paid a salary adequate to their employ, and on no account suffered to receive any emolument or fee whatever from the forest.

#### ALICE HOLT AND WOOLMER FOREST.

THIS forest is situated in the east part of Hampshire, on the borders of the counties of Surry and Sussex, and is bounded on one side by the river Wey, which becomes navigable at Godalming, about ten miles from the middle of the forest, which falls into the Thames, and affords an easy conveyance for timber to Woolwich, and other dock-yards in that river.

By an ancient perambulation made in the twenty-eighth year of Edward I. it appears, that this forest had been enlarged in the four preceding reigns, and reduced by Edward I. to its original limits, in consequence of the provisions in the *Charta de Foresta*, and of a grant from the Commons of a fifteenth part of all their moveable property.

The whole of the forest within this boundary contains about 15,493 acres; about 6,799 acres of which are private property, the remaining 8,694 acres are forest lands belonging to the Crown.

There are two divisions in the forest, one called Holt or Alice Holt, and the other Woolmer, which are divided by intervening private property.

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Alice

Alice Holt was formerly divided into three walks, but now there is no distinction. Woolmer is divided into two walks, called Linchborough and Box.

Alice Holt contains about 2,744 acres of land upon which, according to a late valuation, there is timber worth about 60,000*l.*

Woolmer contains about 5,950 acres, upon which there is no timber worth mentioning.

Although there are two divisions, they are all one forest, and are governed by one set of officers subject to the same forest courts.

The claims upon this forest were very few in the times of James I. and Charles I. and those only for timber, but they are considerably increased of late years.

The ancient government of this forest was exercised by a Lieutenant, Ranger or Keeper, Verduers, Regarders, Agistors, and Under-keepers, and the courts of Swaninote and Attachments; but the Lieutenant has for many years been granted on lease for terms of years, with the power of appointing officers for which he was formerly allowed a fee farm of the manor of Wordleham, amounting to 100*l.* annum; and a great many other perquisites of the forest, upon condition of his paying the salaries of the officers in the forest. In the year 1701, 100*l.* was added to his salary.

It appears there has been continual altercation between the Crown and the Lieutenant respecting the right to the lop and boughs of the timber felled, which has generally been claimed by the Lieutenant; but the Crown also claims a right to all the deer upon the forest, upon the whole, Government has but little to do with it.

In the year 1608 there was a survey made of the forest when there were found growing in the forest



fit for the Navy, and 23,934 loads of defective trees; and from a survey of the timber in 1783, it appears there remained only about 15,142 loads, including sound and defective trees, and that those are generally of one age, viz. from 100 to 120 years growth; and that there are scarce any to succeed them, so little care having been taken of late to encourage a succession. It therefore is highly necessary for Government, to take some steps to ascertain the respective claims of individuals upon this forest, as we have recommended in the New Forest, and the remainder might be properly planted and cultivated.

#### FOREST OF BERE.

THE forest of Bere is situated in the south-east part of Hampshire, on the north side of Portsdown, and within eight miles of Portsmouth.

From a perambulation made in the reign of Edward the First, this forest was much more extensive than it now is. Another perambulation was made in 1688, and which is now considered as the boundary. This forest is divided into two walks, called the East and West Walks, and each walk contains several smaller divisions called purlicus, but they are not properly purlicus, being within the regard of the forest, and subject to the forest laws. There are sixteen of these purlicus, belonging to different proprietors, who have the right of the soil, timber, and wood; but the whole are subject to the range and feed of the king's deer, and the commoner's cattle.

The whole forest contains about 16,000 acres, of which about one third is inclosed, and the rest open forest land; the land in general is extremely good, and proper for the growth of oak timber.

The Officers of this forest are, a Warden, four two Master Keepers, two Under-Keepers, a Steward of the Swanimote court, twelve Regarders, and twelve Agistors. The stock of deer is about 200 head, and about seven brace of bucks are annually killed.

The encroachments are chiefly in the West Wood, where there is no resident keeper; and the greater part of the forest is in a very bad state at the present date. These encroachments are not confined to the property of the Crown, there are many in other lands, particularly in those of the Bishop of Winchester. Of late it has been a practice to grant copies of forest lands as copyhold, taking a fine and reserving a small portion of the timber, and many abuses have crept in from the non-attendance of the lord, so that this forest has suffered considerable depredation.

There was a survey of the timber in this forest in 1783, from which it appears, that the timber in 1783 was only one 28th part of what was grown in the former period; and it does not appear that any order has been made to protect and encourage the growth of young timber, which this forest is particularly adapted, both as to soil and situation; and it would certainly be much to the advantage of all parties, if a general inclosure and division were adopted.

GENERAL VIEW  
OF THE  
AGRICULTURE  
OF THE  
ISLE OF WIGHT,

(Forming a Part of Hampshire.)

WITH  
OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY  
THE REV. MR. WARNER,



# ISLE OF WIGHT.

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## INTRODUCTION.

THE Isle of Wight, called Gwith by the Britons, Vectis by the Romans, and Weët by the Saxons, lies on the coast of Hampshire, and is included in that county; the strait that separates it from the main land is of unequal breadth, being about one mile over towards the western, and about seven miles at the eastern extremity; its form is somewhat like a lozenge; the greatest length from east to west is twenty three miles, and breadth from north to south thirteen; its superficial contents are reckoned at 100,000 acres.

The Island is divided into two hundreds, called East and West Medine; contains thirty parishes, and rather more than 18,000 inhabitants. Its chief towns are, Newport (the capital) Cowes, and Yarmouth. The air, particularly in the higher southern parts, is extremely wholesome; frequent instances of longevity occurring, and a general appearance of health and vigour prevailing among the lower ranks of people. Its fertility is almost proverbial, having long since been said to produce more in one year, than could be consumed by its inhabitants in eight; an improved husbandry introduced of late years has increased this fertility, and from what I have been able to collect, we may now estimate its annual production to be at least ten times as much as its consumption.

## SOIL, FACE OF THE COUNTRY, AND ROADS.

THE soil is extremely different in different parts of the island; and sometimes exhibits a remarkable variety, even

in the same parish—Thus for instance, in Brading, the eastern parish, the following varieties occur : the south consists of a free, kind-working earth, mixt with a small portion of sand ; the west, of a light loam, mixt with sand ; and the north and east parts of a stiff clay, scarcely yielding to the operations of the husbandman. In many parts of the island, the soil is gravelly ; in others stony ; but its general character is a strong and loamy earth, well calculated for agricultural purposes. It abounds with marble, both white and stone ; chalk, fuller's and brick earth ; tobacco pipe clay ; stone of different qualities ; and various kinds of sand. Of the last, a fine white sort is found in the parish of Tisbury, on a manor belonging to John Urry, Esq. of Tisbury, esteemed far superior to any other in the kingdom, and used in great quantities for the glass and porcelain manufactories.

The face of the country is various, beautiful, and picturesque ; consisting of gently swelling hills, diversified by intermediate vallies, verdant well watered meads and corn fields. A chain of hills stretches from east to west through the heart of the island, and the short, sweet food which they afford to the sheep, renders their wool and meat equal to that of the sheep bred on the downs of Sussex. In the southern parts of the island, particularly about Steephill and Uffington Cliff, it is interesting to observe how the industry of the inhabitants has overcome certain local inconveniences. Many spots of ground, hereabouts, lie in such intricate situations among the crags of mountains and rocks, that one might imagine their situation should secure them from the operations of the husbandman : the islanders, however, have contrived means to reduce all these spots to tillage ; and even the steep cliffs which appear, from their rapid descent and whimsical inequalities, to be most incapable of being worked, yet by planting them, sometimes in a transverse, and sometimes in an oblique direction, they make them produce heavy and

dant crops. This operation, however, is a very laborious one, and I frequently remarked it was necessary for them to have five horses to perform it. Notwithstanding the situation of these pieces of land, they let at 20s. and upwards per acre.

The roads of the island (particularly in the eastern division) are paid great attention to ; and except in the southern parts, where the rocky soil renders them rugged. are as good as those of Hampshire. The western division being less populous, the roads here are less pleasant to the traveller; though indeed of late years, great improvements have been made in these means of communication throughout the whole island.

They are formed and repaired as in other places, by the respective parishes or tythings through which they pass.

#### GRAIN, COURSE OF CROPS, MANURES, &c

THE grains cultivated in the island are, wheat (red strawed), barley, oats (sometimes the Tartarian, but they are not found to answer) beans, and pease ; though more or less attention is paid to the three latter, according to the situation of the different farms, and the different nature of the land. This will appear from the following statement of the rotation of crops in various parts of the island.

Towards the eastern extremity, the common course, on the free, light working land, is

- 1st. year Wheat
- 2d. — Barley or oats
- 3d. — Clover
- 4th. — Wheat.

On the stiff land they have wheat only once in four years.

At the southern part of the island this course is used :

- 1st. year Wheat
- 2d. — Fallow dunged and turnips.

- 3d. — Barley
- 4th. — Clover

About Steep-hill the following management occurs: oats, or pease; barley with clover; mow it next season; feed it afterwards; plough it up; give it a summer's rest, and sow it with wheat again.

Near the center of the island the rotation is as follows:

- 1st. year, Wheat.
- 2d. — Barley
- 3d. — Clover
- 4th. — Wheat.

Towards the western extremity:

- 1st. year, Turnips
- 2d. — Barley
- 3d. — Clover and ray-grass
- 4th. — Wheat.

The wheat is prepared for sowing, in general, by steeping it in salt water, and afterwards mixing it with lime.

In the eastern part of the island, the medium produce of wheat is about twenty-nine bushels, of oats twenty-five, of barley thirty, of pease twenty-eight, and of beans twenty-five bushels per acre. In the southern and western parts the produce is rather larger; wheat thirty bushels, oats forty, barley thirty, beans thirty-two, and pease twenty-eight bushels per acre.

In preparing their land for wheat, the islanders give it two or four ploughings (as the soil requires) to their clover, and one on breaking up their clover lays. They sow two bushels and half per acre: for oats they seldom sow more than once, and sow about four bushels and half per acre; for barley they give three ploughings, and sow four bushels per acre.

The grain is, in general, broad-cast, though some have adopted the drilling system for wheat, barley,



pease, which is found to succeed very well in the free, light, and sandy soils. When this husbandry is practised, they use a small kind of horse-hoes, which are worked by a man; these, with the assistance of hand-hoes, and earthing up the ranks, and keeping them clean by women and children weeders, combine to produce profitable crops.

In many of their stiff, clayey lands, the islanders dibble beans; but some improvement might be introduced into this branch of husbandry. By planting ten pecks upon an acre (a common practice) a very useless waste of seed is occasioned; and in not hoeing them when they come up, which in general they omit doing, the plant is less healthy and productive, than it would be if properly attended to.

Potatoes are not so much regarded here, as their excellence and utility deserve. The little farmers and labouring poor are almost the only people who plant them; the land intended to receive them is fallowed and well dunged, the potatoes (divided according to their eyes) are then planted in rows; the rows being about a foot distance from each other; and earthed up when about four or five inches above the ground. In general, the crops are very satisfactory, from sixty to 110 sacks per acre.

I confess, I am astonished, that more attention is not paid to the potatoe, in this part of Hampshire, where so many spots are found peculiarly well calculated for its cultivation. Of all the roots which our climate produces, none perhaps is of greater or more general use than this; whether it be considered as a meliorator, cleanser and improver of the soil, or as a plant which affords a cheap and nutritious food, both to men and to cattle; viewed in the light of profit also, it would assuredly answer well to the Isle of Wight farmer to cultivate potatoes, as his vicinity to Portsmouth, whither they might be carried at a trifling expence, would always insure him an immediate and profitable market for his crop.

Turnips are now highly esteemed in the south and central parts of the island; and the farmers are committing an error, which, some few years since, they were of, viz. not hoeing this valuable root. They hoe four times, harrow and hoe once; and feed the sheep, by hurdling.

The times of sowing and harvest are these: winter vetches are generally sown in October, and in August; oats are sown in March, barley in March, in February, and pease in March. Pease are sown in the latter part of July or beginning of August, and grains in September.

Their manures are chiefly chalk, and dung from the farm-yard, which, after lying for some time mixed with earth; from fifteen to twenty pots of this compost, are spread on the lands prepared for sowing. Chalk is also much used: its durable and improving effects having been of late years experienced by the farmers, they put about one hundred bushels of chalk on each acre, which are found to operate beneficially for four or five years. Some few enlightened and experimental farmers of late tried the effects of sea weeds as a manure, by mixing them up with dung, lime, and earth, but the compost which adds so much to the natural fertility of the land, that it will doubtless speedily induce others to pursue a like profitable practice.

When they find it necessary to marle, they take from twenty to twenty-four waggon loads upon each acre.

The farms in the Isle of Wight are of a great variety, from 100l. to 400l. per annum, with a few of 500l. and upwards. The average rent is about 17s. per acre. Estates, worth about twenty-eight years purchase.

## GRASSES, PASTURE, DRAINING, &amp;c.

THE green crops mostly cultivated are, turnips, clover, vetches, ray-grass, and trefoile. They have, also, some buck wheat; but the quantity is small, and only raised in their lightest and most sandy soil. It is generally given to the hogs for the purpose of fattening them.

Of clover, they cut on average about one ton and a half per acre, and then let it go to seed. Vetches are now and then sowed after clover, and according to the pleasure of the farmer, are either fed off, or mowed, and given to the horses in the stable.

Their pasture and meadow land is extremely rich, and produces from one to two tons of fine hay per acre; the dry meadows are well manured at the proper season with good rotten dung; and the wet ones kept in excellent order by well managed drains. The common method of forming these drains is, by digging a trench two feet and a half deep, in which small picked stones, or lumps of chalk, are thrown, to the height of a foot; on these is placed a layer of straw, heath, or furze; and the whole is then covered with the soil. The expence of this operation is about nine pence per perch.

## SHEEP, HORSES, COWS, AND SWINE.

THOSE profitable and useful animals, sheep, have been very much attended to of late years by the Isle of Wight farmers, who have found their account fully in adopting that excellent system of husbandry.

The numbers of sheep annually shorn are computed to amount to 40 000. Last year upwards of 5,000 lambs were sold to the London butchers alone; and in August, when I happened to be at Newport, one of these dealers bought 1,500 at a single purchase.

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The breed, in general use, is the Dorsetshire; but, however, by occasionally changing it, that degeneracy is prevented, which I observed began to appear in three flocks. This is a practice common with all the sheep farmers in the west of England; and, as I have some of the most intelligent declare, is the only means of keeping up the original perfection of their flocks.

The average weight of wool per fleece, in the eastern part of the island, is three lbs. and in the southern and western about three lbs. and a half. Little of this is manufactured in the island, it being chiefly exported in the fleece to the trading towns.

The stock usually kept on the farms consists of sheep and horses; oxen are rare, what few there are, they usually feed with straw and hay, and work them as horses.

The cows are mostly of the Alderney breed, though with English sorts; which the farmers think retain butter better than it would otherwise be. They are extremely profitable, some of them giving, during part of the season, ten pounds of butter per week. It is matter of surprise that this breed is not more generally used, in other parts of the kingdom, than appears to be the case. The original value of a good Alderney cow, at the place where she is imported, is seldom more than eight guineas; she is equally hardy as our own breed, consumes less provender, and yields as much milk, the cream of which gives a rich butter, not observable in what is made from the common cow.

The horses are of different breeds, but in general, and I think black. As there is some emulation among the farmers with regard to the beauty and strength of their draught horses are fine animals, and kept in good condition.

It was the practice formerly among the farmers of the island, not to confine their cattle to the farm-yard in winter. Their own good sense, however, or hints from other

them of the pernicious consequences of this omission, they now adopt farm-yard foddering in the winter, generally, and thereby reap the certain consequences of practice, health to their cattle, and a great addition to farm-yard manure.

Hogs are of a breed, I believe, peculiar to the island, I do not recollect seeing any of the same in other parts. They are large and tall, marked with black spots, and have deep sides. The bacon is excellent.

Swine and cows are fattened with hay, barley, meal, &c.; the hogs with pease and barley meal; the sheep are wintered with hay and turnips.

The dairies produce, in considerable quantities, two sorts of milk cheese; the Dorsetshire, and what is emphatically called Isle of Wight Rock; they are extremely hard, and can only be cut but by a hatchet or saw, are to be masticated by the firmest teeth, and digested but by the strongest stomachs.

#### TIMBER.

Timber was formerly extremely plenty in the island, but the merchants have had so good a market for it at Portsmouth and the other dock-yards in and near this district, that little remains; of this little, the oak and elm appear to be flourishing. Improvident of the future, they have not planted in proportion to their cutting down; and consequently, there being no young trees to supply the place of the old woods, in a very few years the island will be entirely bereft of its timber, and a great part of its beauty will be lost.

A powerful reason, which perhaps has prevented the improvement of land here (and which operates in a like manner in other individuals in other parts of the kingdom) is the want of labour from the

from encouraging the growth of oak on their estates, more profitable and quick return made to them by keeping in tillage. To bring this noble tree to maturity, no less than one hundred years are required; and it is hardly to be expected, that the man of small property should forego the immediate profits arising from his land, in an uncertainty of advantage to his family, at a distance of time which he can scarcely extend his ideas of interest; but it is well known that this tree requires the strongest, firmest, and deepest soil; which being the most lucrative for husbandry, it is not extraordinary, that individuals should apply it to other purposes, than that of raising oak timber. The objections, notwithstanding, however strongly they may be urged, the farmer, or landlord of small property, certainly lose a part of their force, with respect to the possessors of great estates; to them, the inconvenience of appropriating acres to the planter of timber, would be but trifling; the expences attending it would not be felt, the loss of the immediate profits arising from the land would not affect them; as large estates are oftentimes entailed, or continue in the same family for a long series of years, the planter of the *present* century, might reasonably build upon the prospect of his descendant enjoying the fruits of his labours in the

For Government to interfere at all with the use or management of private property, by enforcing, in any manner, the planting of oak on the estates of individuals (an act adopted by parliament in the sixteenth century) would be justly deemed a trespass on one of the most sacred rights of the subject; but what it cannot *compel*, it might *allure to*, by holding out honours, pecuniary rewards, or other stimuli, to incite and encourage the proprietors to cherish the growth of this valuable tree; and thereby to provide supplies for the future navies of our country.

## WASTE LAND, FORESTS, AND SEA MUD.

THERE is but little waste land in the island; and this chiefly exhibits a sandy soil, which would not probably pay the expences of its cultivation.

Perhaps, indeed, Parkhurst or Carisbrook Forest, lying in the center of the island, may at present be properly denominated waste land, as it remains in an inactive useless state, without affording any advantages to the Crown, whose property it is; and very trifling ones to the inhabitants who reside in its neighbourhood. This tract of land, which contains 3000 acres, is situated to the north of Newport and Carisbrook; and though called a forest, has long been without a tree of any value; there is, however, a lodge still kept up, and a keeper appointed, whose office it is to preserve the deer and the wood, of which scarce a vestige remains. Notwithstanding the inattention paid hitherto by Government to Parkhurst Forest, the soil is, in many places, extremely good; and capable of being applied to the most valuable purposes; several large spots are to be found on which the oak would thrive surprizingly well, and none are so bad as to preclude the hope of the larch and Scotch fir succeeding on them.

The obstacles which present themselves, to the plan of inclosing and planting the other royal forests in the kingdom, such as the adjustment of multiplied and complicated claims, &c. would perhaps be gotten over, without much difficulty, in the case of Parkhurst Forest, should Government think proper to appropriate it to the growth of timber; since these claims are but few, and confined to a small number of people, (the real ones I mean, for that of a general right of common for black cattle, exercised by the freeholders of the island, appears to be a surreptitious one; and consequently might be settled with little trouble and expence. These claims consist of a right of common for cattle and sheep;

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and of turbary, and are attached to the estates adjoining the forest.

In the eastern part of the island are some tract of ground, covered at high tide by the sea, but by the reflux; the largest of these (the others being in the neighbourhood) is Braden Haven, containing about 900 acres. The sea flows through a narrow inlet. As early as the reign of Edward I. an idea was entertained that there was a possibility of recovering this usurpation of soil from the sea, and converting it to agricultural purposes; and accordingly William Russel, warden of the island at this period, made an attempt; and actually succeeded in gaining a considerable number of acres, a circumstance rather remarkable, attention being paid, in that barbarous and unenlightened age, by the feudal chieftains, to any thing connected with agricultural improvements. Further acquisitions were made in the years 1562 and 1594.

The next, and last attempt was of a more extensive nature; the particulars of which, as they are curious in themselves, and may afford useful hints to future attempts of that line, I shall extract from Sir Richard Worsley's History of the Isle of Wight.

"A grant of Brading Haven was obtained by James I. by Gibbs, a groom of the bed-chamber. The owners of the adjoining land contested this grant, but the King was very earnest in supporting it. After a long time, it was obtained in the Exchequer against the gentlemen of the neighbourhood. Gibbs sold his share, for two thousand pounds, to Thelwall, a page of the king's bed-chamber, who gave it to the famous Sir Hugh Middleton to a share. To him he gave a number of Dutchmen to inclose and recover the land from the sea. The first taking of it in, cost 1,000*l.* more were expended in building a dyke, a barn, a water mill, trenching, quick-setting, and other necessary works; so that including the original



total expenditure amounted to seven thousand pounds. But after all, the nature of the ground did not answer the expectation of the undertakers ; for though that part of it adjoining Brading proved tolerably good, nearly one half of it was found to be a light running sand ; nevertheless, an incontestable evidence appeared, by the discovery of a well, cased with stone, near the middle of the haven, that it had formerly been good ground. Sir Hugh Middleton tried a variety of experiments on the land which had been taken in, before he sold his share, sowing it with wheat, barley, oats, cabbage, and finally with rape seed, which last was alone successful. But the greatest discouragement was, that the sea brought up so much ooze, weeds, and sand, which choaked up the passage for the discharge of the fresh water ; at length, in a wet season, when the inner part of the haven was full of fresh water, and a high spring tide, the waters met under the bank and made a breach. Thus ended this expensive project ; and though Sir John Oglander, who lived in the neighbourhood, confesses himself a friend to the undertaking, which, besides its principal object, tended to render that part of the country more healthy, he declares it as his opinion, that the scheme can never be resumed to any profitable purpose.

“ Sir Bevis Thelwall and his heirs laboured to ascribe this accident to other causes, in order to preserve their claims, and to recover compensation for their losses ; but the whole affair died away, and the sea still overflows the haven.”

The ill success of Sir Bevis Thelwall and Sir Hugh Middleton seems sufficient to deter any future projector from risking so large a sum as would be necessary to recover Brading Haven from the sea, on a speculation that has already turned out so disadvantageously. But should any gentleman be bold enough to attempt its embankment, he would do well to pay every attention to the mode adopted by the late Count Bentinck, for shutting out the sea on his Norfolk estate ; who has shewn an example, almost unique in this

kingdom, of laudable spirit, unconquered perseverance, sound judgment, and consummate skill, in adding property upwards of one thousand acres formerly whelmed by the ocean.

#### IMPROVEMENTS AND EXPERIMENTS.

THE improvements introduced of late years in the Wight husbandry, are chiefly such as have occurred in the preceding pages. The general introduction of large sheep on the different farms, the adoption of some of the Norfolk husbandry, and other smaller matters.

But I cannot help dwelling more particularly upon an experiment, which, as it is connected with agriculture, naturally falls within this general view of that system of husbandry practised in the island. I allude to Sir Richard Worsley, at his elegant cottage of St. Lawrence.

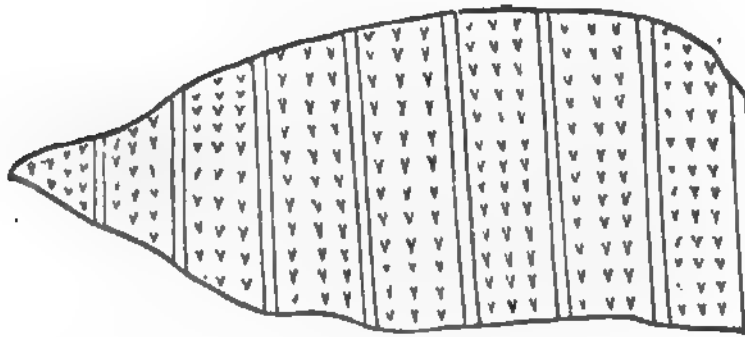
The classical owner of this charming retreat, having remarked a very sensible mildness of climate in this part of the island, (occasioned by its lying immediately open to the south, and being sheltered to the north and east, by a range of rocky hills, which at the same time shut out the biting winds, and strongly reflect the rays of the sun upon the soil beneath them) determined to attempt the propagation of the vines of Brittany, the climate of which place corresponded in some measure with that of Steep-hill. For this purpose he procured the necessary number of plants, and two grapes called *White Muscadine* and *Plant No. 1*, which the natives of the western parts of France produce a light white wine; and at the same time hired a Breton to attend to their management and cultivation.

The man began his operations in the beginning of the year, having gotten rather more than an acre (in a very

spot) into proper order for the reception of the plants, in the month of March he put them into the ground.

This piece of land is divided into several beds, each bed being about twelve feet in breadth; these are separated by foot-paths for the convenience of a near approach to the vines. The plants themselves are placed in rows, at the distance of a foot and a half from each other.

As this first experiment wore a very encouraging appearance, another piece of ground, rather more to the eastward, and about an acre and a half in extent, was gotten into order, and a similar plantation made in it in February 1793. These two plantations comprise together about three acres, and contain 700 plants. That a clearer idea may be formed of the disposition of the vines, I have added a rude sketch of the latter.



The man who has the care of these plantations seems very equal to the charge, and keeps them in high order: the stem of each vine is about eight inches from the ground, and the earth around it is well hoed, and free of weeds. He does not allow more than two shoots to remain on each stem; these are cut off in the ensuing March, and their place supplied by other young ones. The shoots also are not suffered to run into luxuriance; but kept at the length of two feet, or two and a half. In September last, when I had the pleasure of seeing these plantations, every vine bore the appearance of health.

health and vigour ; there was some little fruit of those which had been first planted ; but this was to be attributed to their being situated near the wall, receiving the rays of the sun strongly reflected. The vine-dresser did not expect any considerable crop of grapes till the fourth year after the planting. I entertain no doubt as to the success of his labours. He assured me, he had never before seen such a numerous young plants in any vineyard.

But, in order to give every possible chance of success, Sir Richard has not confined himself to the ordinary mode of planting only. In a bank within his inclosure, the slope of about 45 degrees to the south, he has formed a terrace consisting of seven stages, formed of rising like a flight of steps one above another. The perpendicular part of each stage are placed in a row, and between them the vines are intended to be trained in the ordinary manner of espaliers. The plants were put in last March.

With respect, however, to this mode of planting, it may admit of doubt whether it be the best or not, owing to the small degree of nourishment which the plants can possibly receive as they now stand. The vine, when *mature*, will flourish where there is no soil, nay, where there is apparently no soil, gravel, flints, and rocks, drawing support from its but far extending fibres, from sources imperceptible to human eye ; yet I believe, in its *infant* state, it requires nutriment, and more room for the extension of its roots, than it will find where it is at present.

I cannot close this short, and I fear imperfect account of Sir Richard Worsley's vineyard, without adding a few words for the success of an experiment, which displays the spirit, and has been attended with considerable expence.

## THE POOR, LABOURERS, PRICE OF WAGES, &amp;c.

A FEW years back, great abuses having been experienced in the management of the poor, in the different parishes of the island, the gentlemen determined to adopt some mode of remedying the evil; and accordingly, in 1770, a general meeting of the respectable inhabitants was held, in which it was proposed that an Act of Parliament should be procured, to consolidate the poor rates of the several parishes, and to erect a House of Industry for the general reception of the paupers.

The proposal being agreed to, a Bill was accordingly obtained, and a large building erected on part of the Forest of Packhurst, eighty acres of which were granted by Parliament for this purpose.

The plan of this extensive edifice is extremely good, having every convenience that can tend to render its inhabitants healthy, useful, and industrious. It is capable of containing seven hundred people, though there are seldom upwards of five hundred resident paupers, two-thirds of whom are constantly employed in manufacturing sacks for corn, flour, and biscuit, and kerseys, stockings, &c. for the use of the inhabitants of the house. The profits of these operations are applied to the support of the establishment, the payment of the interest due on the money borrowed for carrying it into execution, and the gradual discharge of the principal.

The Act of Parliament, indeed, provided, that for the first twenty years after the completion of the plan, half the profits arising from the labour of the poor should be applied to the reduction of the poor rates; and half to the payment of the sum borrowed. It being, however, found, that the reduction thus made in the former was but inconsiderable, it was thought prudent to apply the *whole* to the latter purpose, which

which has been the case for some few years last past. This measure, notwithstanding, as may be supposed, has given disgust to several, who are not disposed to endure a present trifling inconvenience, for an eventual permanent good; and they talk loudly of compelling, by a suit in Chancery, an adherence to the letter of the Act of Parliament.

The rates throughout the island, were not equalized at the time of their consolidation; but, that each parish might pay its fair proportion to the new establishment, an account was taken of the amount of their poor rates, respectively, for the seven years preceding; and an average being struck, this was determined to be the ratio of their future payments, till reductions should be made from the profits of the house. Hence it is, that we find the rates vary considerably, in different parts of the island. Thus, for instance, Brading pays 3s. 3d. in the pound upon two thirds of the rent, Whitwell 2s. in the pound, upon the rack-rent, and Freshwater not more than 15d.

Every praise is due to the gentlemen of the island, for their attention to the regulation of this great establishment, which, at the same time that it exemplifies the possibility, points out the mode, of rendering the most unhappy and useless part of the community serviceable to their country, and comfortable in themselves.

It is a source of great pleasure to the feeling and reflecting mind, to observe a general appearance of content and decency among the labouring poor of the island, a description of people, who, in other parts, are too often overwhelmed with want and wretchedness.

This their comfortable state they chiefly owe to the occasional kindness of the farmers, who bear the character of humane and generous masters, and their living, in a great measure, on potatoes, a wholesome and nourishing food, and plentiful with them, as every labourer's family has a plantation annexed to his dwelling, stocked with this useful root.

root. Indeed, without these assistances, they would be scarcely able to exist, as the rate of wages is but low in the island, provisions dear, and the rent of cottages rather extravagant, being from 40s. to 2l. 15s. per annum. They are indeed neat little dwellings, built of stone, and each having a garden for the accommodation of the tenants.

The rates of wages, as well as hours of work, vary in different parts of the island. In Brading parish, labourers have two guineas for the harvest months, and their board ; eighteen pence per day for grass mowing, and their beer ; and one shilling per day during the rest of the year, when employed. Their hours of work are, in winter, from seven to four ; and in summer, from six to five. In the southern and western parts, they get fourteen pence per day, but give an additional hour of labour, viz. from five to five in summer, and from seven to five in winter.

The crops, however, of the island are so large, (most of the land being in tillage) that the resident labourers are by no means sufficient for the cutting down and harvesting of them. This dearth of hands is supplied from the western counties, and between six and seven hundred labourers annually pass into the island, a little before harvest, and hire themselves to the different farmers for the month. The usual wages for this period are, two guineas if it be peace, and about forty-five or fifty shillings if it be war. They have their board also. For the time they are employed before and after the month, they have two shillings per day, food and liquor.

During the last harvest, there were near seven hundred Dorsetshire and Somersetshire men employed ; and as a warm press was at that time on foot, each of them was allowed a protection from Government, during his passage from his own habitation to the island and back again.

The character of the labouring poor in the isle of Wight, is that of an honest, industrious, and sober people: they seem,

however, very unenlightened, few of them (part of the children) being able to write or read. When we visit other parts of the kingdom, and see the successful operation of one of the noblest plans of general improvement ever suggested, the establishment of *Sunday Schools*, by means of which the morals of the lower ranks of society are improved, their manners civilized, and useful knowledge imparted into them, we cannot but lament that similar institutions are not held out to the labouring poor in the same manner. Both morals and policy dictate and enforce the adoption of this excellent system. To impart instruction to the ignorant is confessedly our duty; and I believe, no one can doubt that fulfilling this obligation has a tendency to improve the instructed less valuable members of society who are when in a state of profound ignorance. I would not wish me to determine what precise degree of knowledge is necessary to afford to the lower ranks of society, but I think I may venture to say, all such information as is bestowed, as can tend to impress their minds with a sense of their obligations to God, the community, and themselves.



**POSTSCRIPT**  
**TO THE**  
**SURVEY OF HAMPSHIRE.**

---

IN A LETTER TO SIR JOHN SINCLAIR, BART. M. P.  
PRESIDENT OF THE BOARD OF AGRICULTURE, FROM  
THE SECRETARY TO THE BOARD.

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SIR,

FEELING it my duty to apply a portion of the absence from town with which the Board has indulged me, in procuring such information as I could best rely on, in some county not yet *reported*; and having an opportunity, through the attentions of W. P. Powlett, Esq. M. P. an Honorary Member of the Board, to examine a very interesting district in Hampshire; I have viewed with care, and collected by means of that gentleman's friendly and patriotic exertions, some practices, that will, I trust, be thought interesting to the prosperity of that county.

For some miles, in various directions, around Soinbourne, in the vicinity of Stockbridge, the district, in past times, has been chiefly a *down country*; but, now mostly broken up and converted to tillage. This change has been effected in a manner, and with effects, that will throw some light on two very material inquiries: 1st. Paring and Burning; and 2d. Courses of Crops; and the result will shew, in what respects, breaking up of sheep downs, may or may not be advisable.

The practice very general here, has been to break the maiden down by paring and burning, to sow wheat that operation, followed by barley and oats; and then down again, by sowing ray-grass, which resting two years is manured with dung and fold for wheat. Sainfoine (it has been long a sainfoine country) is broken up in the same manner as any old lay, and followed by a similar bandry. Bad managers have, on first breaking up the down taken more than three crops of corn in succession, so long as the land would yield, and then abandoning it to what nature or a little ray-grass would produce. Some good farmers sow turnips on pared land; but generally for wheat. In a country thus managed for many years the effect of paring and burning could not fail of being seen.

The soil is generally a thin calcareous loam on a chalk or chalk *rubble* bottom; of different depths, much of it a few inches; some deeper. The rent before breaking was from 2s. 6d. to 3s. 6d. and some 4s. an acre. The original down now left is very trifling; there is some on Dunbury-hill, and in a few other spots; but the quantity is where great.

The whole arable of the country seems to be almost uniformly in the system; an imperfect burning taking place every ten, twelve, or fourteen years; some farmers do it more than others, but all very much. By *imperfect* I mean the practice of harrowing before burning, which shakes much earth from the *flags*; also *raftering* the down which is a sort of rest baulk ploughing, on account of the number of flint stones rendering it too difficult to plough. In almost every direction I saw the same fields that were under the operation, generally intended for wheat.

In the conversations I had with several gentlemen of

subject, I found the practice very generally condemned; and that it was the cause of so many fields now being found in a state worse than the original down. The farmers, and I conversed with several very sensible and intelligent, generally approved of it.

That the husbandry as here managed is very incorrect, can admit no doubt. To sow three successive crops of white corn, in consequence of the benefits derived from the operation, is to rack and exhaust the soil, and following these with ray-grass, chiefly mown the first year, and none that I saw *close* fed, is to continue *cropping* when the land most wants repose. If therefore the practice is really and essentially bad or ruinous, as so many think it, here seems one district in which it should be found peculiarly so.—But the facts I met with will not justify such a conclusion.

The rents of the lands thus tortured, have risen in twenty years from 50 to 100 per cent. The downs that were let 12s. 6d. and 3s. an acre, are now at 5s. and 6s. Whatever the practice may be, therefore, it cannot materially have hurt the landlord, if it has in any cases hurt him at all.

In conversation with Mr. Tredgold, of Chilbolton, a very understanding farmer, much employed as a Commissioner, in inclosures and in valuing land, I found that he condemned the practice of burning the turf with mere paring, and without harrowing, in order to sow three crops of corn; but demanding his opinion of sowing in such case only one crop of corn after turnips, and laying down to artificial grass with that one crop, he readily admitted that no land could be so hurt. He very justly attributed the evils which are certainly seen in many cases to follow paring and burning, not to that practice, but to the cropping which follows it. Himself, his father, and his grandfather, have burnt every ten or twelve years, and he has never suffered by it: and added, that Mr. Bailey burns more than any body, and no man's farm is in better order.

These

These facts, uniting with the general of rents risen greatly in spite of this practice, ought to make us situate before we join in those declamatory expressions of demnation heard sometimes in conversation, and found in some Reports that have been made to the Board. Parliamentary decisions, in questions of great difficulty thoroughly explain, are usually the result of inexperience or rather than of experiment or patience. The argument commonly heard, is, that it lessens the staple of a thin soil. Facts are clear against this, for if it were true, there are that would have been much more than lessened, for it would have been all gone centuries ago. The practice is known to have been of great antiquity, and not to be executed but in proportion as a *turf* is formed; the President la Tour d'Aigues shewed me lands in Provence, that had been pared and burnt probably for two thousand years. He justly ridiculed the idea of wasting the soil. The question is, whether you shall rot or burn the vegetable particles; that method is apparently the best which produces the best crops. Every man with his eyes open, in this country will see the crops given by paring; the practice is that of all the good crops I have seen, and they have many would do credit to much richer countries.

Upon the theory of this practice, and the chemical principles by which it acts, I shall not presume, Sir, to inform you at present; enough has long been known, to prove it is perfectly consistent with good husbandry; but recent discoveries of the great part that is played by vegetable particles acting as manures, the result of many interesting experiments, and which have been touched on with probability by one of the greatest chemists of the age, Mr. Lavoisier, in a late publication, should at least suspend the decisions of men who have not themselves made very numerous and accurate experiments.

As to the facts produced against the practice, they

general to shew that the mischief is the result not of the operation, but of the cropping which follows. This is the case of nine tenths of the instances that have to my knowledge been published. Convert grass to corn, and twenty to one but the field is injured, do it how you will; and no wonder that a method which gives a great sudden fertility, and in consequence very great crops, should tempt men to be bad farmers for present profit: no wonder that such a practice should, in such hands, reduce many fields to a wretched state. But make it the means of converting bad grass to good grass, and where will the mischief be found? Paring and burning will give a crop of turnips, and a crop of oats that shall exceed in value the fee-simple of the land they are raised on; sow grasses (not ray) with those oats, and see if the pasture, compared with the old down walk, or lay, will not be one of the most decisive improvements in the power of husbandry to effect! Is this the method that has been followed by those, who are so ready to condemn what probably they never tried?

In riding over this district, I viewed many fields *ruined*, as it was called, by paring and burning: and, in truth, the appearance almost justified the expression. They had been burnt for wheat, then two crops of spring corn, with the last ray-grass sown; this mown, the first year, oftentimes seeded, which in exhaustion makes a fourth crop, and then fed without any attention to keep it close shorn. In such a scourging system, how can the real merit of a practice be ever ascertained?

The experiment wanting in this country, in order to convince the farmers of their error, is to pare and burn an old down or layer, and sow turnips and oats, to introduce the grasses suitable to the soil; sainfoine, if it has not been lately under sainfoine, and if it has, other grasses, such as burnet, chicory, white clover, trefoile, rib-grass, tall oat grass, &c. and

no ray. Whoever examines such a field, will not excu-  
se that burning has ruined it.

The next circumstance I wished to trouble you upon  
their Courses of Crops: under this head I find some prac-  
tices exceedingly singular.

The barbarism of taking three crops of white clover  
in succession, and then ray-grass after paring, has been  
sufficiently treated; but they do not in other respects seem to  
have more correct ideas.

In this interesting point of arranging the crops of a  
field, the two greatest discoveries of modern times, have been  
the introduction of turnips as a preparation for barley; and  
of clover, as a preparation for wheat. Turnips and clover  
are found here, but the one not preparing for barley, nor  
the other for wheat.

Some of the fields, which carried as bad a countenance  
as most in the country, were turnip land left unploughed  
and lying fallow for wheat. I would not imply, that I saw  
barley after turnips. I met with some, but most of the  
turnips I saw were intended for wheat; either to be fed  
in time for that grain the first year, or fallowed for it the  
second year. The first method is, upon comparison with a corn  
summer fallow, certainly excellent; but it demands the  
turnips to be eaten at a time when they are either not wanted,  
or at least are not nearly of so much use as they would be in  
the season. To fallow turnip land for wheat, is a practice  
which no expression can be too severe; it is infatuation  
and ignorance in the extreme.

As to sowing wheat upon the first year's clover, or  
earth, I did not see a single field managed so in the whole  
district. They sow after clover, almost every crop to be  
*except wheat*. I wished much to have a reason for  
this practice, but could hear of nothing satisfactory. There  
are, however, many ray-grass layers, and some mixed  
clover, that are sown after two years with wheat, but

system of management very singular : this is, to plough it in June; to ~~muck~~ it directly, that is, manure it with long-unrotted dung from the yard; upon that dunging to fold it; and thus leave the field for wheat, with no more ploughing, but to work it well with the drags, harrows, and roller, and not to give even a seed earth. There seems, on a just theory, to be something to praise and something to condemn in the practice. Sowing the wheat on an old or stale furrow, may probably, on a loose soil, be very good management, as their drags are able to keep down weeds, (there are scufflers and skims, however, that would effect that much better) but to leave long dung on the surface, burning through the summer, seems a very questionable practice. It is what they are fond of here in other cases; for I saw much top dressing with long muck, of various crops, after sowing, particularly for vetches; but the result did not seem to confirm the propriety of the method. The mere circumstance of applying the dung for wheat, when spring corn is to succeed, is a practice that ought to be condemned. In Norfolk they dung for wheat, from the opinion that there remains ample benefit in the land for securing a good crop of turnips: exhausting the manure, without the progressive improvement of food for cattle increasing, is in every case bad.

It is fair to allow, that their wheat crops are generally, soil considered, extremely good: with so much expended to procure that grain, it would indeed be marvelous if they were not.

Upon the farm of Mr. Yalden of Leckford, I saw very fine wheat sown upon two successive crops of turnips, both fed on the land by sheep.

The object of a right arrangement of the crops of a farm, cannot receive too much attention; almost every thing depends on it. If there is a circumstance to be named in Norfolk husbandry, which more peculiarly decides its merit than another, it is that of their course of crops, so well adapted

to keep the land clean, to put in wheat and to support as many sheep as possible. The essential consequence, and it must be clear to every man, that without keeping turnips through the winter, sheep must either be very deficient in weight at an expence of hay that deducts greatly from the profit. The Hampshire practice, in this respect, is a strong assertion. With great quantities of sainfoin on the best farms, and the assistance of watered meadows, the flocks no where exceed half a sheep per acre being kept on a farm of 600 acres. It is upon a par with that of Norfolk and Suffolk, the latter possessing a favourite breed of sheep, the best breed is found, and many farmers proud of it. But in those counties they have not the resources of sainfoin, though not unknown, is not in great quantity; and watered meadows, one of the great resources for the flock-master, absolutely wanting.

Upon all the arable hills of this district, which cannot be cultivated, upon every field that will produce a crop that it cannot be renewed with success on less than twenty or thirty years, does not succeed; and those who are acquainted with the experiments, know that it has succeeded in a number of places. There is no crop which these lands will produce so profitable. Where it cannot be had, the lands already named are vastly superior to any other.

For the information I have procured in this district, so much indebted to the obliging attention of Mr. Powlett, Esq. an Honorary Member of the Society, I do not refrain from adding one or two very valuable experiments made by that gentleman, which will be able to render any one acquainted with the district where he resides.

Having reason to be dissatisfied with



flock of Wiltshire ewes, he changed them, in 1792, for one of South Downs, on the recommendation of the writer of this paper ; and he now keeps more than double the number of his former stock. Upon 800 acres. rent from 5s. to 20s. an acre, about 7s. upon an average, he has 1200 ; his provision consisting of 60 acres of pasture, 200 sainfoin, (horses and cattle supported also on that) 100 vetches, 30 rye for food, and 120 turnips. Though the expence of procuring so large a flock almost at once, was very great, yet he is well satisfied hitherto with the result ; and as an high opinion of the breed is fast gaining ground in this country, he has every reason to expect, that the future advantages will not be less than the past. That this very important experiment, was not made without due consideration of the breed already established in the country, will appear from the following particulars of the flock represented to me as the most capital in the district, Mr. Paine's of Norton Farm, who was so obliging as to allow me to examine his rams, &c. I found them remarkably large, and his lambs uncommon ; as may be supposed from the fact of his having sold lambs (not a few picked ones) at 11. 8s. each at Weyhill fair, and the average of his sale, in a common year, rising to 17 or 18s. each.—His allowance of hay is 30 ton per 100 ewes, besides plenty of turnips ; to 700 sheep he has 180 acres. In conversation with several considerable and very able farmers, this quantity of hay seeming to me enormous, I was assured that 25 ton was a common allowance, and that indifferent flocks eat 20. Mr. Yalden, whose flock is neither bad nor in the first class, allows 100 tons to 400 sheep. I calculated the expences of a flock under the correction of those gentlemen, and the following was the result per hundred, at the lowest allowance of hay.

20 tons of hay at 50s. (selling price 3l.) --

10 acres of turnips cost 18l. £. s. d.

viz. per acre,

Ploughing	-	-	-	1	0	0
Dragging	-	-	-	0	1	6
Seed and Sowing	-	-	-	0	1	6
Hoeing	-	-	-	0	6	0
Hurdles	-	-	-	0	1	0
Rent, &c.	-	-	-	0	6	6

£ 1 16 6

Shepherd 35l. per 700

Losses 4 per cent, on 100 sheep, at 20s.

Shearing, &c.

Interest of capital for 100 ewes

The product was stated as follows:

Lamb

Wool

Fold

Difference in price, between the  
ewes annually sold, and the  
lambs kept, 7s. on one third,

Deduct 83l. per 100, or

7s. 9d will pay for 31 weeks summer food,  
and if the farmer keeps for less than 3d. a w  
rence will be the profit on the flock; but if s  
him 3d. a week, there is then no profit what

The accuracy of calculations of this sort cannot absolutely be relied on in any case; and the only conclusions necessary at present to be drawn from them, do not demand accuracy; for whether it be a little higher, or a little lower, is not of consequence, to shew that it well merited attention to a breed which demands such *high keep*. The result of the account shews, that Mr. Tredgold was very right in declaring, that sheep in this country were attended with no other profit than the fold. We may go a little further and say, that they do not yield the profit of the fold; and that Mr. Powlett could not have devised a more important experiment, than that of making trial of a much better sort. He is not yet stocked; intending to buy more; and will, I have no doubt, prove the expediency of the change beyond any doubt or question.

In weaning his lambs I saw a practice upon this gentleman's farm, and also upon some others, but not on an equal scale, which is not common elsewhere, and in many counties unknown, that of penning them upon full grown winter tares, just in the same manner as turnips are consumed in Norfolk, &c. I should, on theory, have conceived, that the waste, would have been very great; but this is not the case, at least in dry weather they were eaten clean, being left in the evening, and taken out in the morning, having a clover lay for the day. Nothing could seem to do better than the lambs, thus managed. The flock of ewes were also feeding in other fields, exactly in the same manner. Six acres of tares, with many poppies in them, (eaten clean also by the sheep) kept 550 ewes three weeks, having fifty acres of burnt-up layer, as bare as a board, where they rested a day. Three years ago, 400 horned sheep consumed two acres a week of fine spring tares, but the same method. This seems to be a profitable consumption of tares, and to enable a farmer, by varying the time of sowing, to secure a great plenty of food.

Another experiment of this able cultivator has been, the compleat introduction of oxen for ALL the work on his farm.

He

He has 25 of the Devonshire breed, bought in at Bristol at from seven to ten pound each, upon lands that were before cultivated with 25 horses; and, much to his honour, not a single horse on his farm. I do not at present recollect any other instance, in which this very important object has been so determinedly and so effectually established; his plough with a pair with reins, and without a driver. It is remembered, that there is not an acre of meadow on Mr. Powlett's farm, the oxen depending almost entirely on vetch and sainfoin, and is a new proof of the infinite importance of that noble grass. He makes it a rule, never to work on straw, but always to give them hay; and he attributes ill feeding, so many persons condemning oxen, and at times when hard *wrought* he gives them ground oats. He works them as long as they will move well, and then lets them rest.

Mr. Powlett has made many other interesting experiments; but upon this occasion I touch only on great points, which tend immediately to elucidate either the present state of the husbandry of the district, or the most necessary improvements called for.

I beg, Sir, that you will accept this sketch, in which I have aimed, as much as possible, at brevity, under the impression that I presume it is complete enough to be considered in another light, than as hints for enquiry. The gentlemen who are on the spot, are alone able to give perfect satisfaction; if Mr. Powlett himself, would for this purpose take the trouble, nobody would be better able to ascertain with precision what the country, in these interesting points, is capable of improvement.

I have the honour to be,

Sir,

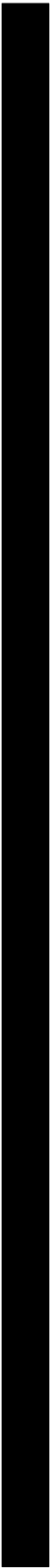
With great respect,

Your obliged, and obedient servant

ARTHUR YOUNG







GENERAL VIEW  
OF THE  
AGRICULTURE  
OF THE  
COUNTY OF BUCKINGHAM





GENERAL VIEW  
OF THE  
AGRICULTURE  
OF THE  
COUNTY OF BUCKINGHAM  
WITH  
OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY  
MESSRS. WILLIAM, JAMES  
AND  
JACOB MALCOLM,  
OF STOCKWELL, NEAR CLAPHAM.

*QF DRY*  
DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF  
AND INTERNAL IMPROVEMENT.

LONDON:

PRINTED BY COLIN MACRAE.

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## TO THE READER.

IT is requested that this paper, may be returned to the Agriculture, at its Office in London, with any additions and observations which may occur on the perusal, *writ* *margin*, as soon as may be convenient.

It is hardly necessary to add, that this Report is, printed and circulated, for the purpose merely, of procuring further information respecting the husbandry of this district, enabling every one, to contribute his mite to the improvement of the country.

The Board has adopted the same plan, in regard to all counties in the united kingdom; and will be happy to afford assistance in its power, to any person, who may be desirous of improving his breed of cattle, sheep, &c. or of trying an experiment in Husbandry.

LONDON, MAY, 1794.



## BUCKINGHAMSHIRE.

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### INTRODUCTION.

**THIS** is an inland county, separated from Berkshire on the south and south-west by the river Thames : on the west it is bounded by Oxfordshire ; on the north by Northamptonshire ; on the north-east by Bedfordshire and Hertfordshire ; and by part of Middlesex on the east.

Its greatest length, from north to south, is about forty-five miles, its breadth about eighteen miles, and its circumference one hundred and thirty-eight miles, containing 518,400 statute acres of land.

Its chief rivers, from which it derives great advantages, are the Thames, Ouse, and the Coln. There are several other smaller rivers on which flour and paper-mills are erected ; and the canals now making through different parts of the county will be of essential service to it, as by them the various products of its interior parts will more easily be conveyed to the metropolis, as well as to the distant market towns through which, or near which they may chance to pass, to the ultimate increase of agriculture and commerce.

The air is reckoned very wholesome, particularly about the Chiltern hills, the soil of which is chalk ; that of the vale is rich loam, strong clay with a layer of loam upon chalk ; and this will more clearly appear in our account of the several parishes through the county, in each of which common-fields prevail.

It



It will be found, that in order to render this perfect as possible, no pains have been spared with precision, by ocular proof, the facts and circumstances we relate, trusting as little as may be to the inaccurate accounts which have hitherto been given us. As we therefore, have for their object the information and the consequent good of mankind, these inquiries in all reason interest the public even before the end proposed. It is true, that success is the principal thing that influences the opinions and acknowledgments of men; but surely some regard ought to be paid to the cares, the pains, and the labours of those who have been devoted to the service of mankind, in whose life their endeavours may have been exerted. He has his walk chalked out by the great hand of God, and he best fulfils his duty who adds something to the stock of improvement and knowledge. If then the Board has presided over this noble undertaking of the improvement of Agriculture, should give birth to new and useful inventions, or even agreeable projects, and become the cause of any discovery, the public will eventually reap the benefit, and the Board the greatest reward that can be given, the consciousness of having laboured for the good of mankind.

*The Nature of the Soil.*—It appears that the soil is principally composed of rich loam, strong clay and gravel. As to the first, its ability to produce good crops without the assistance of much manure is evident from the uniform verdure of the herbage (as applied to the dairy, farming, and only occasionally to the very great supply of butter which is produced on that land. To cultivate this, therefore, in any other way, would, perhaps, in no instance so well answer the purpose of the farmer, and the great increased



which there is for this article of life, makes it desirable that such land as is fitting for the purpose should be appropriated to it; and we shall shew hereafter, that independent of so large a portion of land as this will take, there will still be enough, under a proper system, for all the purposes of grain and wood. With respect to the strong clays, much of that is in grass also; but as from the nature of it, it must be cold and wet, and thereby produce a sour and coarse herbage, it follows in course, that to render all such lands productive, and to supply the place of more congenial soils, such steps must be taken as are most likely to answer that end. It is an admitted fact, that ungrateful and barren soils, when mixed together, often produce good and plentiful crops; and it is equally true, that as the earth contains several heterogeneous particles, these likewise concur to promote vegetation. The way, therefore, to procure fecundity is to supply the earth with plenty of these nutritive particles, and then to dispose the soil in such a manner, as that it shall not present any insurmountable obstacles to the tender fibres of young roots, which necessarily require freedom to expand and lengthen themselves, in proportion as they swell and grow, which space nature never fails to afford in proportion to the size and wants of the plant. It will follow, then, from hence, that the mixing of soils should be always made according to the tenacity or looseness of the particles which compose them. This being admitted, we find no difficulty in saying, that sand, gravel, and even small stones, may produce an abundant fruitfulness in a field, the soil of which is already too close, compact, and as it were, glutinous, and will, in a very great degree, alter the nature of the soil. A very effectual assistance will no doubt be rendered to all such soils, by draining, either by lowering and scouring the ditches (which will oftentimes alone be sufficient) or by regular and proper land-drains.

Every attentive farmer will, therefore, use those materials to amend the strong clays, by applying such opposite materials as are most likely to answer the desired end; but must not expect to arrive at perfection in this art all at once; it may cost him some trouble, and some expence, and it may be well, if after all, he receives some reward for his pains sufficient to convince him that the plan is practicable, and that perseverance will accomplish it.

*The State of the Land how possessed?*—In looking over a division of the manors of this county, it evidently appears, originally they were in few hands; consequently that the property possessed by individuals was large, which is indeed the case to day in some measure the case; but the great influx of wealth has of late years been the means of making that property more general. That this may tend to cultivate a spirit of improvement is very probable, since wherever gentle seats, and the more opulent yeomanry, are found, it is in the neighbourhoods that the introduction of new systems of improvements upon the old are to be found: as a proof of this we need only say, that the southern part, though very inferior to the northern part for richness of soil, yet in point of situation, from being elevated, dry, healthy, and pleasant, it derives considerable advantages, and which could not fail to invite, as the place of their residence, many noble and gentlemen of the first consequence. On the hills are the seats of the Earl of Inchiquin, Countess of Orkney, Lord Boston, and the very improving seat of Lord Grenville, together with other families of lesser note. In the same division, but in the lower parts, are to be found the seats of the Dukes of Marlborough and Portland, Marquis of Lansdowne, Earl Beaulieu, Sir John Dashwood, William Drake, Edmund Burke, Esq. Edmund Waller, Esq. William Pitt, Esq. These, with a few others, make up the principal seats in this division; and to them may be ascribed, in a

degree, those improvements that are visibly to have been made in the various parts of agriculture. In the northern part, the magnificent seats of the Marquis of Buckingham, the Earl of Chesterfield, Sir William Lee, Bart. form the chief models for improvement in the vale; and it would be a shame indeed, if, in the neighbourhood of those places, the same inattention to every advancement in the science of agriculture prevailed, as, unfortunately, it does in the more remote parts of the district: it is, however, not so; and therefore, where such advantages are to be derived, it were to be wished, for the benefit of individuals as well as for the good of the country, that the residence of men of distinction was more numerous, as well as more regularly dispersed throughout the kingdom.

*State of Farms.*—As so great a portion of this county is in dairy and grazing farms, it might have been expected, that many of them would have been very large: on the contrary, however, it appears, that there are not many of 500l. a year, two or three of 1000l. and the generality from 60l. to 250l. a year, throughout the county.

*The Land how employed.*—In the vale of the northern district, the land is composed of pasture, meadow, and arable. In the Chiltern it is principally arable, with a great portion of beech wood.

*Grasses.*—Among the grasses which compose these pastures, are to be found a mixture of the *poa annua*, *poa pretensis*, *poa aquatica*, *bromus mollis*, *anthoxanthum odoratum*, *plantago lanceolata*, *avena flavescens*, *holcus lanatus*, *panicum viride*, *alopecurus pratensis*, *triticum repens*, *agrostis alba*, *ranunculus acris*, *festuca elatior*, *trifolium repens*, and *trifolium pratense*: these are more or less to be found in the several pastures; but there are also a variety of noxious weeds to be met with in those meadows, of which little or no care is taken

It appears somewhat extraordinary, that, at this time of day the only grass seed to be purchased, is that of the rye grass : that this grass is by no means sufficient for the purpose of laying down meadow and pasture land, every intelligent farmer will readily admit. No other grass, however, that we know of, is ever attempted to be saved, if we except the holcus lanatus, or what is called Yorkshire hay seed, which is very far from being a desirable one, growing always in large tufts, and is a soft woolly grass. Why, therefore, the rye-grass (or botanically speaking, the lolium perenne) should originally have been the only grass made choice of in preference to all the others, cannot at this time of day perhaps be sufficiently accounted for; and why it should still be so tenaciously adhered to, it is equally difficult to assign a reason, as a knowledge of botany has been so generally diffused. So many elaborate treatises have been written on the grasses, and other indigenous plants of this kingdom, in so full and complete a manner, that with a moderate capacity, and little trouble, any man might sufficiently satisfy himself which of them are best worth cultivating. As making a part of a rotation of crops in common with clover, &c. rye-grass may be well calculated; but certainly not in laying down land that is intended to remain for meadow.

In looking over a very ingenious miscellaneous tract, written by the celebrated *Stillingfleet*, the following apposite remarks appear: "It is wonderful to see how long mankind have neglected to make a proper advantage of plants of such importance, and which are, in almost every country, the chief food of cattle. The farmer, for want of distinguishing and selecting grasses for seed, fills his pastures either with weeds, or bad or improper grasses, when by making a right choice, after some trials, he might be sure of the best grass and in the greatest abundance that the land admits of. At present, if a farmer wants to lay down his land to grass what does he do? He either takes his seed indiscriminately from

from his own foul hay-rick, or sends to his next neighbour for a supply. By this means, beside a mixture of all sorts of rubbish, which must necessarily happen, if he chances to have a large proportion of good seeds, it is not unlikely but that what he intends for dry land, may come from moist, where it grew naturally, and *vice versa*. This is such a slovenly method of proceeding, as one would think could not possibly prevail universally. Yet this is the case as to all grasses, except the rye-grass, and what is known, in some few counties, by the name of Suffolk grass, or *poa annua*; and this latter instance is owing, I believe, more to the soil than any care of the husbandman.

"Now, would the farmer be at the pains, once in his life, of separating half a pint or a pint of the different kinds of grass seeds, and take care to sow them separately, in a very little time he would have wherewithal to stock his farm properly, according to the nature of each soil, and might at the same time spread these seeds separately over the nation, by supplying the seed-shops. The number of grasses fit for the farmer is, I believe, small; perhaps half a dozen or half a score are all he need to cultivate, and how small the trouble would be of such a task, and how great the benefit, must be obvious to every one at first sight. Would not any one be looked upon as wild, who should sow wheat, barley, oats, rye, pease, beans, buckwheat, vetches, turnips, and weeds of all sorts together? Yet how much less absurd is it to do what is equivalent, in relation to grasses."

Such are the words of this very intelligent author. Nothing more need be added to prove, that as much proportional profit would certainly arise to the farmer, by a careful and proper selection of grasses, as by a judicious choice of grain. In making such a selection the following kinds are recommended, viz. Meadow foxtail, or *alopecurus pratensis*, rough stalked meadow grass, or *poa trivialis*, and *avena elatior*, or tall oat-grass. These affect moist land. Meadow fescue,

or *festuca pratensis*, *anthoxanthum odoratum*, scented vernal grass, and yellow oat grass, or *avena flexilis*, these delight in either moist or moderately dry lands. The smooth stalked meadow grass, or *poa pratensis*, crested dogtail, or *cynosurus cœruleus*, each of these affect dry lands. And the quantity of each for use may be in the following proportion: meadow foxtail, meadow fescue, tall meadow grass, one pint of each; smooth stalked meadow grass, smooth stalked meadow grass, yellow oat grass, half a pint of each; crested dogtail, blue dogtail, and sweet scented vernal grass, a-quarter of a pint of each; Dutch clover, or *trifolium repens*, half a pint; red clover, or *trifolium pratense*, a pint. Such an assortment as this, sown in the proportion of about three bushels to an acre, will, in a tolerably favourable situation, and on a properly prepared soil, form in two or three years a most excellent meadow.

*Sheep*.—North Wiltshire withers for store, and the ewes for breeding, are the prevailing sheep of the county. Some of Mr. Bakewell's breed have been lately introduced, and promise success: but the wetness of the soil, and by its tenacity, produces very serious losses by the rot. A gentleman farmer has assured us, that he had lost 600 sheep during the last eight years; and urges the necessity of not changing the breed, or improving its constitution, in spite of the sterility of the soil to the support of sheep.

It is not, therefore, to be expected, that this county will make a conspicuous figure in the important article of sheep farming; more especially as grazing and the dairy seem there to be the favourite pursuit.

*The Cows*—consist of the short horned Lincolnshire and Yorkshire breed; but very different from those kept for the milk, in the environs of the metropolis, which are bought in after the first or second calf is dropped.

average of about twelve guineas: but the price is not an object, when put in competition with the quality of the animal, and therefore fifteen pounds is a very common price. The average quantity of butter produced from one cow, is about eight pound weight a week, in the summer; and about six pound weight in winter. The butter is sent to London to the different dealers, who contract for it at nine-pence per pound (of sixteen ounces) in the summer half year, and ten-pence halfpenny in the winter half year. The carrier finds baskets, cloths, &c. fetches the butter from the dairyman, and delivers it at one penny per pound; so that the price is increased to ten-pence and eleven-pence-halfpenny: therefore, every advance in price upon those sums to the consumer, is the profit of the retailer. An acre and an half, or two acres of land, are conceived to be sufficient for a cow, both summer and winter. The cows are in general milked by men; and the milk of different cows put indiscriminately together into square troughs, lined with lead, is skimmed twice a day, and the cream of the several skimmings put together into one tub or vessel, until the day fixed for churning, which is generally twice a week. They make use of a barrel churn, with two handles (one at each end) turned by two men, who will make from six pounds, to one hundred and twenty weight at one churning. A mill has lately been introduced into some of the dairies, which is worked by one horse, and turns one or more churns at the same time. This machine will be found very useful, and evidently only wants to be explained and made known, to become general; for the difficulty of procuring men to turn the churns would, by the use of the mill, be done away; and this would be no small accommodation to the farmer, whose men servants make many objections to this employment, (which is certainly very laborious) and generally set about it with an ill will, often quit it before it is finished, and as often contrive to get out

of the way, when likely to be wanted for this thereby obliging the owners to put off the churning till another day, to the great detriment, if not the spoilage of the butter; all which would be obviated by the help of a horse about the farm; nay, in one instance, we saw a bull made use of for turning the machine, which appeared very tractable, so that no horse there was. The regular motion of the horse is much preferred for the above reason, but also as it quickens the operation of the butter, and makes the attendance of a man not necessary, the whole being left entirely to the dairy-woman. A sketch of one of these machines is here given. It can be contrived to grind beans, malt, &c. at the same time. The dairies are kept with that exact neatness which must be pleasing to every inspector, and to which we are happy to pay our tribute of commendation.

The method practised in Devonshire of making butter from scalded cream (as will be explained in the survey of this county) the mode adopted in Ireland, and that practised in this district, differ so essentially from each other, that it perhaps be advisable for the Board to suggest some experiments to be made, in order to ascertain which mode is the preference.

*Calves.*—In the neighbourhood of Medmenham, Little and great Hampden, &c. &c. a great number of calves are suckled; these are for the most part bought by dairy farmers, who do not think it worth their while to suckle or to raise any as a supply against any deficiency which may be occasioned by death, &c. How far it is a good policy in them, they certainly ought to be the better judges. But from experience we know, and the vale too plainly shews it, that few men give themselves so little trouble as the farmers, and perhaps no set of men adhere more



ciously to old practices and particular customs than the farmers in general.

**Hogs.**—Every dairy farm fattens a certain number of these animals, with the skim-milk and butter-milk, without any other assistance, except when there is a scarcity of milk; and then barley-meal, beans, or pease, are used as a substitute. The usual time they take to fatten to a state to be consumed as fresh meat, is from four to six weeks.

**Oxen and Cows.**—These constitute the principal stock of the grazing farms; the former are composed of Yorkshire and Herefordshire beasts, which are bought in lean, from twelve to fifteen pounds per head; the latter are barren cows, purchased from the dairymen.

Perhaps (the Pevensy Level and Romney Marsh excepted) no land in the kingdom is better calculated for this purpose than the Vale of Aylesbury. Its amazing fertility soon makes a visible alteration in the appearance of the animal, and the extraordinary size they afterwards attain, is a proof of the quality and ability of the land. They are grazed about ten months, and then fetch from twenty to twenty-five pounds each; but when kept longer, as they sometimes are, some have sold for forty pounds. If grass becomes scarce, they are finished off with hay, and sometimes a mixture of oil-cake and barley-meal.

*Watering of Meadows considered.*—As to some countries nature appears to have been very sparing in affording them the power of watering their lands; so, to others, she has been exceedingly bountiful in this respect. The undoubted truth is, the wise hand of Providence has bestowed on each situation, throughout countries, kingdoms, and the whole globe of earth, its peculiar advantages; so as to make the

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good of the whole depend upon the contribution of parts.

In the district now under consideration, we find possessing in so high a degree the advantage of that the farmer can flow his grounds when, and as he pleases, brooks and rivulets running through the midst of these fine meadows, with few or no mills to controul him in the free application of their waters to the streams. Would it be believed, then, that except in the neighbourhood of one or two of the paper-mills, scarce one acre of land watered throughout the district. Concerning so singular a circumstance the Board is satisfied that we have omitted no opportunity of obtaining information; having made every possible inquiry of the most intelligent and best informed men.

One very respectable gentleman farmer, in Aylesbury, assures us, (and this was confirmed by others) that their meadows were by nature so rich, that it is practised in other countries, made their crops rank and coarse, that two acres of their natural grass, not watered, though less in quantity, was equal in quality; and worth more than two acres and a half of the same quality of meadow, in a watered state.

There the richness of the soil pleads somewhat in excuse for the farmer, in the same manner as the climate of Mexico and Peru for the indolence of the Spaniards.

*Land how employed.* As we before observed, a large portion of this district employed in husbandry.

On the southern part, the land is generally of a light soil, either on gravel or chalk, and appears to be under as good management as that soil is capable of. The farmers are at great pains and expence in pur-

nure, and in collecting every sort of materials that constitutes or assists in the increase of manure; and that is not only applied with judgment, but is aided by the most modern agricultural improvements, as well by repeated cross ploughings, and drill husbandry, as by the cultivation of every sort of green meat, as turnips, &c.

The grains chiefly grown are wheat, barley, oats, beans, and here and there saintfoin.

In the northern part of the district, and even as far as Northamptonshire, a very different system of agriculture prevails from what we have noticed in the southern part. Perhaps no two districts can differ more in that respect, than do the two divisions of this county. As we have observed in the former a sedulous attention to the best modes of improvement; so we must remark in the latter, a general appearance of bad management. In the former, the lands are ploughed in a husband like manner, in such straight and moderate sized lands as are most suitable and convenient for the nature of the soil: the latter, though in possession of as fine a loamy soil as is in the kingdom, plough their lands in a compleat serpentine form, to the middle of the ridge, which they make so aukwardly high, that they become dangerous to waggons or carts, either carrying manure to the land, or carrying the crop from it.

Such is the custom about Aylesbury and Buckingham. So rich and fertile is the soil there, that we were assured it was considered a disgrace to a farmer, to suffer a heap of manure to be seen at the end of his field, to plough in straight lines, to disturb an ant-hill on his pasture, or to permit more water than falls from the heavens to pass over the meadow.

Where such prejudices as these obtain, what can be expected? We shall excite no wonder, by remarking after this, that there are hedges spreading over from twelve to twenty

feet of ground, going from year to year without that the ditches are so neglected that little more than of them are to be seen ; and that the head-lands, at the ends of their fields, are raised so high above the land, that a great quantity of soil which is from time to time brought up by the plough ; and are withal so wide, and yield so little, that they are not worth notice.

Ask a Suffolk, a Norfolk, or a Kentish farmer, whether he would suffer these things on his farm? He would instantly answer, No ; I will lop as many of my hedges, annually, as will furnish me fuel, and serve various purposes to my farm. I will dig my ditches annually, which will not only drain the land, but and keep it dry, but furnish me with a certain quantity of manure. I will plough up some of my head-lands, and lay the cleanings of my ditches, the scrapings of the roads, whether sand or chalk, together with the stubble of the fields, and the soil from the farm-yard ; all these I will mix together, and make a body of manure invaluable, and which may be applied to any purpose I may require. Such would be the language, and such ought to be the practice of every farmer.

In one part of the county we were informed, that the farmers had continued to sow the same kinds of grain for many years, without having it in their power to produce a sufficiency of manure, and by being restricted from sowing clovers, &c. to enable them to keep sheep to fold ; so that they were reduced from a state, which among the farmers might be called opulence, to absolute penury ; the land therefore, in itself, being worn out, and incapable of bearing any more long.

*Rotation of Crops considered.* Throughout the district the practice is nearly the same, turnips fed off, barley and the latter mowed the first summer once, and grazed the second year, and laid fallow for wheat. This is the practice

the hamlets of Chesham. In the neighbourhood of Wendover, the rotation is wheat or pease, barley, sometimes oats, and fallow upon the chalk, wheat, beans, and fallow upon the clays.

In the neighbourhood of Hardwick, the custom of the leases confines the farmer to three crops and a fallow; and one farmer in that quarter had received notice to quit his farm, because he had deviated from the specific terms of his lease *in sowing clover*. In the parish of Weedon, which is all common-field, the rotation is two crops and a fallow; wheat or barley, beans, then fallow. It is to be remarked, that few of the farmers have here even a home stall: from being thus confined by their leases to so unreasonable a course of husbandry, the idea of green crops is entirely removed, unless it be in a few particular places; and upon those farms which are occupied by the land-owners, it would be lamentable indeed, if these practices prevailed among them; fortunately, however, that is not the case, and therefore their farms wear a very different and more pleasing complexion.

Of green food, Sir William Lee cultivates a variety of sorts, that they may succeed each other, and he has found the succession to answer for several years: they are in the following order: Turnips sown broad-cast, properly hoed, and in sufficient quantities, in moderate seasons, to last until March; turnip-rooted cabbage succeed these until May or June; after that lucerne, which is cut three or four times, and continues until turnips come in again. He is also constantly provided with the mangle worzel, or root of scarcity, (though any other sort of common beet would answer the same purpose) the leaves of which are very luxuriant: those, together with the roots, are given to his cattle, in case his turnips are not sufficiently forward to succeed the last cut of lucerne. Sir William is of opinion, that these successive crops are admirably calculated for his dairy cows, as he finds thereby the butter incontestibly improved in taste and sweetness,

ness, and the quantity rather increased, and that at all seasons it resembles spring butter. It is also to be understood, that he never gives his cows hay.

*Fallowing, and its Consequences.*—From what has been before said, it will appear that fallowing makes a very particular practice in this county. In a variety of the inclosures the tenant is confined by lease to three crops and a fallow; in common fields to two crops and a fallow. Whether fallowing is the most eligible plan for the public, upon the broad ground that every acre of land should be as productive as possible, we have endeavoured to shew in our Report of Surrey; so that it is hardly necessary to repeat here, that just as much is lost to the community, as that land in a state of fallow cultivation ought to have produced. In the present case, considering the impolicy of the form of the leases, which oblige the farmer to observe a certain routine of crops, the tenant is therefore too confined to answer any good purpose, and prevents him from sowing clover and other green food, and thereby precludes him in a great degree from making a sufficient quantity of dung to manure, either in the yard, or by folding sheep: considering these things, fallowing seems to be the only resource for recovering, in a certain degree, the stamina to the soil, and as such (though not excusable) it is (with respect to the farmer) somewhat admissible. But with regard to the landlord, can any policy be more contracted than such a system? And can it be expected, that under such compulsory obligations, the farmer can either make so large a produce as if a greater latitude was given him, or that he can afford to give so large a rent. It follows therefore, that in the first instance the landlord is not benefited so much as might be; the farmer has less opportunity of increasing his profits; and finally, the public are the greatest sufferers thereby.

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*Manures, and how applied.*---It has already been observed, that in the northern part of the county, the extreme richness of the soil in a great degree precludes the necessity of manuring, especially upon the meadow lands, and we have mentioned the ideas of the farmers as to the expediency of manures upon their arable land, which so long as it is one year in two or three in fallow will not enable them to manure, and therefore that accounts for the few heaps of compost that are to be met with throughout this part of the district. In the neighbourhood of Brickhill, marl is found of a rich quality, and perfectly blue: this is used as a manure upon the lands, loams or gravels, and is applied at the rate of thirty to forty cart loads to an acre, when the land is in the tilth, or in fallow, after the first ploughing, which generally happens in the months of April or May: it is at a certain time ploughed again, harrowed, and then sown. Peat-ash has been found an uncommonly good meliorator of the strong clays, and has been used also in the parish of Brickhill. In the environs of Chesham and Amersham, &c. yard-dung and rabbit's dung are used, as are hair and hoofs brought from Smithfield (at a very great expence) which are found to be great fertilizers of these cold and strong soils. The sowing of ashes and soot, brought from London, upon the young clover and wheat, at an expence of two pounds per acre, is found to answer very well. Here then we shall beg leave to observe, that as experience daily shews, there is scarce an article in the vegetable, animal, or fossil kingdom, but what will act as a manure upon some land or other, so it should make a part of the study of every ingenious man concerned in the improvement of land, to find out by actual experiments such manures as are best calculated for each particular soil; vegetable oil, for example, has been strongly recommended; why not animal oil also? And why not the bones and shells of fish, ground or calcined?

*Implements.*

*Implements.*---Loose handle swing ploughs, drawn by two and sometimes six horses, and low wheel ploughs, both of them heavy and clumsy, at least one horse's draught than the common ploughs. In the southern parts the Rotherham, the Kentish turnwrist, the swing, and the high wheel ploughs. The rollers in the north are much lighter, nor are the bush harrows well contrived, or sufficiently used.

The carts and waggons are upon the common construction, and their great fault is the narrowness of their wheels, which the cross roads are an evident proof of. Cook's carts are but too partially introduced.

*Oxen or Horses, which used.*---It does not appear that oxen are now used in any part of this district; it seems they have been often tried in various parishes; but from the fitness of the land in some parts, and the heaviness in others, they are grown into disuse; besides, the farmers have found it necessary to keep a certain number of horses to carry their produce to market, and therefore, as there are several other employments to which they are not employed to do that work, they have no occasion for oxen. The horses are of the heavy black breed, and are bought in at two or three years old; these are very well calculated for the southern part of the county, where the roads are hard and firm, and where heavy loads are imposed upon them, but certainly not in the stronger parts of the northern part, where dead pulls are not so efficacious as active draughts. Besides, the slowness of their motion is an objection to them every where.

*Seed-time and Harvest.*---Little difference is discernible between the seed-time and harvest of that part of the county which extends itself from Colnbrook to Uxbridge, through Wendover to Stoken Church and Henley, and the part of the adjoining county to the southward. But



cise period can be fixed for either, to the northward of Wens-  
dover and Buckingham, because it is so dependant on the  
wetness or dryness of the season, that it is either earlier or  
later according as the season is more or less wet or dry. In  
the vale, the little arable land that is attached to each dairy or  
grazing farm, is considered in so secondary a light, that no  
criterion can be formed as to either the seed-time or the  
harvest.

*Land, whether inclosed.*---According to the statistical account, which accompanies our description of the common fields, it will be found that the greater portion of the land is inclosed, and that very large tracts are still open ; but as the inclosures are every day going on, it is to be hoped, that in a few years there will not be seen an acre either of waste or of common field that is not inclosed.

*Inclosing, and its Advantages.*---In every conversation we have held with different gentlemen in the several parts of the county, on the subject of inclosures, they have uniformly given it as their opinion, that the advantages already derived, and consequently still to be derived by inclosures, are an addition of rent to the landlord, an increase of produce to the farmer, in quantity and quality, and an improvement on the face of the soil, by draining, &c. It affords also shelter to the crops and cattle, and security to the former against the depredations of the latter, as well as against the bad husbandry of his neighbour; but perhaps as material a consideration as any may be, that it gives to the farmer the liberty to manage his land in such way as he finds most convenient, without paying any regard to what may be the practice of his neighbour,

We might ask, What would have been the state of agriculture throughout this kingdom, at the present day, if nothing but open fields were to be found? How inadequate {Buck.] D would

would be the quantity of grain produced, to the support of the present population, if two crops and a fallow was the custom throughout every parish? And which way would the middling class of people have derived any fuel in the interior parts of the kingdom, at a distance from peat and bog-lands, and the farmer so many useful materials for agricultural purposes, if no inclosures by hedges, and trees and hedge-rows, had ever taken place? Let any one consider things seriously, and the conclusion will be unavoidable, that agriculture has attained to its present height through the means of inclosures, (for with these the common field is no where to be compared) it follows, that the more general the close the more general will be the improvements.

*Size and Nature of the Inclosures.*---In the dairy division the sizes of the fields, in a state of pasture, vary from twenty acres, and some are thirty acres and upward. The arable attached to those farms are from four to ten acres. This in some measure confirms what has been before said, that arable farming makes but a small consideration with the farmers, or else they would not be satisfied with fields of small dimensions for that purpose. In the southern division the inclosures are upon a better scale, being from thirty to thirty acres; but speaking more upon an average, perhaps twelve to eighteen may be near the mark as to the arable, and from four to ten acres as pasture, according to the size of the farm. The inclosures in this division have not a rich soil, but they have a proper attention paid to them, and makes up in a certain degree for every other deficiency. Riches are the parents of luxury, so indolence is too often the consequence of the over-richness of the soil, which requires less trouble, less expence, and less ingenuity in the farmer.

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*Inclosures, and their Effects upon Population.*---In those parishes where inclosures have taken place within the last twenty-five years, such as Muresly, Swanbourne, Hoggeston, Drinton, Cublington, Whitchurch, and various other parishes throughout the district, it is admitted that the population is increased, although some of them are in dairy and grazing farms, which requiring fewer hands to manage them, are less likely to increase the population ; but the fair way of arguing this point, is to consider the increase of produce, which is certainly very great since the inclosures have taken place, consequently the consumption must be greater, and an increase of consumption implies an increase of population. This has long been our mode of reasoning on the subject ; and in making actual inquiries we have found the reasoning just.

*Common Fields, and their Consequences, as applied to the present Deficiency of Grain for the Support of this Country, to which we shall add the Difference of Rent also.*

As it is a subject of no small importance to the grand object which the Board of Agriculture has in view, we have been the more particular in ascertaining, with as much exactness as possible, short of actual measurement, the quantity of common field lands throughout the district, and the proportion of rent they bear to the inclosed lands in the same parish. Entering the county at Colnbrook, the first parish is Horton ; the number of acres in common field is about 500, the soil good loam ; Wraysbury, adjoining, contains about 200 acres, and a similar soil ; Datchet 750 acres, Upton 1500 acres, Eton 300 acres, Dorney 600 acres. The soil in these parishes is generally good, and with the assistance of manure, which is procured from the town of Eton, the crops are for the most part abundant. The proportion of rent is nearly double. The occupiers of the foregoing common fields have exploded entirely the old usage of two crops and a fallow, and

have now a crop every year ; but turnips are not at all cultivated upon them, as the fields are common, after the grain is carried until the seed time.

Burnham parish may contain 800 acres of excellent land under the same mutual agreement as to crop as the preceding. Cippenham, a hamlet in Burnham parish, has 200 acres which let from 20 to 25s. and would let for 35s. if inclosed. Farnham has 300 acres, Wexham 100 acres, Langleigh 200 acres, Iwer 400 acres ; in each of these a good soil. Hedgerly 270 acres, but indifferent land, spoiled by the want of proper ditches to drain it. Wotton 400 acres ; present rental at 20s. an acre, but improved would be worth from 30 to 35s. Taplow 200 acres, Marlow 140 acres, Great Marlow 400 acres ; the soil is loam, and gravel ; present rent 12s. an acre ; proffered if inclosed, 30s. These fields being situated near the Thames, are liable to much depredation from the loose fish employed on the river, which evil, it is conceived, a proper closure would tend to remedy. Medmenham and Haddenham contain 240 acres, Sanderton 400 acres, Horsley 300 acres, Bledlow 370 acres, Prince Risbro at least 300 acres, good loamy soil ; present rent 12s. improved would be worth from 20 to 25s. Monks Risbro 2300 acres, Towersey 1000 acres, Kingsey 250 acres of strong cold clay, some parts gravelly loam. Aston Sandford 400 acres, Little Kimble 500 acres, Great Kimble 350 acres, Stoke Mandeville 400 acres, Aylesbury 1400 acres, the property of ten persons ; rent would realize 20s. in an inclosed state. Little Haddenham 500 acres, loam, clay, and gravel. Great Hampden 400 acres, Great Missenden 300 acres, upper part strong loam, the lower part gravelly loam. Little Missenden 200 acres, Hitchendon 350 acres, Wycombe 200 acres, Chesham 400 acres, light loamy land full of large flints, strong chalk. Amersham 100 acres, rent 10s. inclosed would realize 20s. Wendon 3000 acres.

About fourteen years ago the parishioners came to an agreement, and obtained an act to lay the small pieces of land together: one farmer at that period had eighteen acres, in thirty-one different pieces, and at wide distances from each other. When the division took place, the balks were of necessity ploughed up, by which a great portion of the sheep-pasture was destroyed. It became then expedient, and it was agreed upon at a public vestry, to sow clover and turnips as a succedaneum for the balks.

Two years since, one of the farmers, occupying sixteen acres of these common fields, procured in the month of May a large flock of lean sheep, which he turned on the clover crops, being then nearly in bloom, the greater part of which they devoured. Perhaps this unprincipled act will ultimately benefit those it so immediately and materially injured, as it has stimulated the other proprietors to think of means for preventing such abuses in future. They have accordingly applied to Parliament for an act to inclose the whole; and as the bill carries upon the face of it great public good, as well as great personal convenience to all the parties having property there, there is no doubt but that it will shortly pass. The soil is principally composed of chalk, loam, and clay.

Hatton contains 400 acres, strong clay, and for want of circumferential ditches, holds the water in the furrows, covering a great deal of ground, which it chills, and greatly injures the plants. Ashton Clinton contains 1000 acres, soil kindly loam. Weston Turville 800 acres, Drayton 600 acres, Buckland 500 acres: these parishes nearly assimilate in soil, and the inclosures are double the rent of the common field.

Aylesbury contains 800 acres of strong clay, Dynton 1000 acres, Haddenham 2300 acres; present rent 14s. but capable of being made worth 25 or 30s. Long Crendon contains 2300 acres, Ickford 50 acres, Oakley 200 acres, Edgecot 1000 acres, Marsh Gibbon 1500 acres, Queynton 1400 acres:

acres : all these are loam and clay. Quarrendon is an inclosed parish, and is fine rich grazing land, noted for feeding large beasts ; it is much too rich for the dairy, as it fattens the cows instead of keeping them in a state for giving much milk. Grandborough contains 1200 acres, cold wet clay, found to rot the sheep, which bad quality inclosing would in a great measure remove.

The wastes and balks in these common fields occupy a great space of ground, and yield but very little of any kind of produce.

Steeple Claydon contains 2500 acres, strong wet clay. The custom is here, to have one crop and one fallow. About fourteen years ago, the proprietors came to an agreement to have two crops and a fallow, but before the expiration of ten years, one of the farmers broke through the agreement, and turned in his cattle upon the crops of beans, oats, and barley, in which plan he was soon followed by the rest of his neighbours, and the crops were in consequence totally destroyed on that part of the field, which, agreeable to the ancient custom, would have been fallow. These fields are in a very impoverished state, the farmers sell all their straw, are careless about manure, and depend solely upon fallowing ; the rents, therefore, do not exceed five shillings an acre.

Adstock has 800 acres, clay soil. Padbury 1500 acres, Gaucot, a hamlet in the parish of Buckingham, 676 acres, Maids Moreton 2000 acres, a cold but gravelly soil. Akely 1000 acres, college land ; an inclosure would improve it one-third, as the farms are very much intermixed. Thornborough contains about 3500 acres of common field ; only 200 acres in the whole parish are inclosed. Sheep are very subject to rot here. Great Harwood has 2000 acres, Little Harwood 800 acres ; that part that has been inclosed, is in dairy farms.

Weedon contains 2000 acres, which form the whole of the parish. The farms are from thirty to one hundred pounds  
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per annum, and many of them even without a home stall. Bearton and Hulcot common-fields were inclosed about fourteen years since, and the rents have increased ten shillings per acre.

Wingrove contains 1800 acres, Aston Abbots 800 acres, Wing, with its hamlets, about 2500 acres, the soil loam, clay, and gravel; lets at seven shillings and sixpence per acre; the improved rent would be twenty shillings.

Slapton contains 1200 acres, Eddlesborough 3000 acres, the soil loam, clay, and chalk; Chedington 1300 acres, Ivinghoe 2000 acres, Mersworth 2500 acres, the soil a light black mould. Pittlesthorn 3000 acres, the soil loam and clay. Stewkley 3500 acres, loam, clay and gravel. Drayton Parsloe 1600 acres, Newton Longville 1500 acres, the soil a cold clay. Little Brickhill 600 acres, strong loam and clay, fit for dairy farms. Bletchley 1000 acres, loam, and clay. Waddon 1000 acres, the soil fit for pasture and grazing farms. Castle Thorpe 1500 acres, now inclosing. Lavendon 1000 acres, good loamy soil upon limestone, cold. Brayfield 700 acres, loam and gravelly soil. Clifton Reynes 400 acres, Newton Blossomville 800 acres, good loamy soil. Emberton 1000 acres, good manageable soil.

The cow commons are large, and the soil good, but overrun with rushes, and very apt to rot the sheep; but this is generally the case with all the commons belonging to the commons-fields in this county.

Sherrington contains 1000 acres, good loam. Astwood 600 acres, Newport Pagnall 1600 acres; of which there are fifteen proprietors; soil various, deep, rich loam, strong clay, and gravel; average rent ten shillings per acre. But as these fields lie contiguous to the town, they would, if inclosed, let for twenty or thirty shillings per acre.

Mr. Hooton of Ickford Abbey, a very intelligent gentleman, and a practical farmer, occupying land in these fields, has lost, upon an average of the last eight years, seventy  
sheep

sheep by the rot annually, entirely owing to the want of the commons; and he thinks (as do other gentlemen farmers) that it is in vain to attempt any improvement of their breed, while they are subject in so great a degree to a destructive malady. Inclosures would, in this case, be a great way towards removing the evil complained of. The parish contains 800 acres of stiff clay.

Putting these several parcels together, then, we find that the county of Buckingham contains about 91,000 acres of common-fields, exclusive of the wastes, which we hereafter describe.

From the complexion of the agriculture of the county it is evident that much remains to be done; and there are few counties in this kingdom, taken in general, possessing a soil more peculiarly adapted to the cultivation of grain, artificial grasses, turnips, cabbages, and other kinds of green meat, together with all sorts of forest trees, than that with so little labour and expence.

To shew the importance of inclosing these commons, we shall take the liberty to state (as we did in our Report for Surry) the probable increase of produce; and if we do not in our calculation, the country, by the inclosure of these commons, will find an addition equal to 60,000 quarters of grain annually. We are led to make this calculation from the fact, that in the major part of these fields, the paucity of the produce, and the poverty of the crops in general.

As this Report may fall into the hands of some gentlemen who may not have seen our Report of Surry, we perhaps be right to recapitulate here the substance of our former arguments on this head. We there stated that, after a very minute inquiry among the farmers, proprietors, and occupiers of land, as well as others throughout the county, we were led to conclude, that according to the present state of those fields, a greater produce than what generally is obtained could not be expected. But say they, "G



to inclose them, and do not restrict us to so unreasonable a system of cropping, and we will give an increase of rent equal to at least one half, generally two thirds, and in many instances double. What then does this prove? Why, most clearly, that inclosures must be more favourable to agriculture, and of course more beneficial to the community, as well as more advantageous to land-owners than open fields. They would allow a greater latitude of cropping; manure would be bestowed in a variety of ways, greater crops would be produced, the strong and wet lands would be drained, more sheep would be supported, and these with less danger of the rot; all which would conduce to enable the farmer to give the increased rent we have described.

The way in which we make our calculations respecting the common-fields in question, is this: We have observed that there are about 91,906 acres now in common-fields; we allow upon the broad scale, the odd 906 acres to be taken away for hedges and ditches; there will then remain 91,000 clear acres for arable, &c. and as some of it may be required, or at least may be taken and laid down to pasture, take out 11,000 acres, which perhaps may be the utmost that may be required for that purpose, it will then leave 80,000 acres for arable only; and every bill that is passed for inclosures, should have a compulsory clause, obliging the parties, under certain penalties, to plant a certain number of oaks in the hedge-rows (wherever the soil will at all suit oak) and also to preserve them when planted. We would have remarked, that we do not take any of the common-fields for the sole purpose of making a wood. We before said there were 80,000 acres left for arable; these we divide by four (judging that inclosures will increase the present produce, at least in that proportion) that gives 20,000; and this multiplied by three (which is rather less than the average produce per acre of the present inclosed land, consisting of wheat, barley, oats, &c.) will yield 60,000 quarters of those sorts of grain, over

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and

	Acres.	Acres.	Quarters.	Quarter
take $\frac{3}{4}$ of 80,000	=	20,000	+ by 3	= 60,000
			Quarters.	
			60,000 at 27s. per qr.	= £

We trust we have here clearly and sufficiently shewn the great good that would arise to this kingdom by inclosing common fields, and where the divisions of them are proper we have in their proper places taken notice of it; and in regard to the difference of produce, we shall add, that wherever a liberal system of cropping is allowed, we should have been perfectly justified in setting down the increased produce as much greater than what we have above stated.

*Waste Lands, and their Improvements.*—From the extent of the county, it might have been expected, that a much greater portion of waste land would have been met with. It does not, however, appear to be above 6000 acres; a quantity very inconsiderable indeed, compared to what is found in other districts. But even this quantity is sufficient to deserve an attention towards the inclosing, cultivating, and planting thereof; as it might be made to supply wood for fuel, for timber, &c. or, where more agreeable, for arable. But as the former appears at present of more consequence than the latter, inasmuch as the country every where falls short of a due succession of timber, and that necessary national article requiring a long time to arrive at a state for use, it might be advisable, perhaps, to appropriate the whole (as near as may be) of these wastes to the growth of timber only. We can import corn, when we cannot import English oak.

We shall, therefore, particularize the wastes, quality of the soil, the number of acres which each contains, and that will enable us to form a right judgment of the propriety or impropriety of planting them. But we should also previously remark, that the navigable canals now making through the county, will at all times prove a ready and cheap conveyance for timber, either to the metropolis, or to the dock-yards; and as such will open a new source of wealth to individuals, as well as to the county.

Entering the district in the same part as we did to ascertain the common-field land, the first waste that presents itself is that of Eton, containing about forty acres, at present in good pasture, the soil a rich loam. Farnham waste is about 300 acres of middling soil. Iver Heath, and the petty commons, amount to 1150 acres; the soil loam, clay, and gravel; and those parts that are wet, common ditches only would ef-

fectually drain. Fulmer is 600 acres; the soil clay, chert, and gravel, covered with heath, brambles, and trumpery all sorts: this joins to Stoke Heath, which contains about 1000 acres; the greatest part of which is excellent land, the bottoms are black mould, and the hilly parts inclined more to gravel. Taplow is 150 acres of good loam, part gravelly soil. Wycombe Heath is 1500 acres; soil is various, loam, clay, flints, gravel, &c. upon which grow furze; fern, brambles, and trees of no value. Amersham is 250; loamy soil; present produce only fern and furze. Lee 300 acres, covered with heath and furze, and soil loam, gravel; and sub-soil chalk. Buckingham 1000 acres, Great Harwood 560 acres, strong soil. The wastes of these wastes amount to 6000 acres.

It may be objected, that inclosing the waste lands would be considered as materially affecting a particular class of people; but before we can agree to a position so indefinite and not supported by any proof, let us, for a moment, take a view of the right which these people claim to the commonage or herbage, and see whether the argument will not be diametrically and pointedly against them. It will be found upon a very minute inquiry, that generally speaking, few persons have a right of commonage, but those who are on the land; and consequently this right, *ab origine*, belongs to the landholder. This being admitted, the due quantum to each holder's commonage would scarcely be worth having, provided each man assumed to himself no more than he has a right to do: therefore, while it is observed, that perhaps more than one in ten takes this right, and that the taker takes ten times his share, it follows, that the many are injured and that every attempt at inclosures will be resisted by those who reap the greatest benefit.

Again, it may be objected, that so great an increase in bringing the wastes into a state of cultivation, will affect the landholder.

landholder, by reducing the rent of land ; but supposing it did, is that a consideration with the public ? And ought that to be put in competition with the good that will arise from it, by increasing the quantum of provisions of every kind, the prices of which it would also tend to reduce, to the very great comfort and ease of the lower class of people, who, in their present situation, can hardly procure the necessaries of life ? Has it been upon such narrow principles as these, that this country has attained to its present height in the political scale of Europe ? Certainly not. But to remove every ground of fear from the land-owners on this head, we say, that admitting it should be the determination of Parliament to inclose the wastes, yet from the nature of such an undertaking, as well as from their several situations, it would be impossible that the whole of them could be brought into an immediate state of cultivation ; and therefore the decrease in the value of land could not presently take place. But we have the authority of facts to say, that no such reduction of value need at any time be apprehended, since, it is well known, that (generally speaking) the value of estates is by no means decreased in the respective neighbourhoods of those large inclosures, which have already taken place in the different parts of the kingdom.

The only remaining objection against inclosures, is, that the number of cattle, as well as sheep, would thereby be lessened, and that the quantity of wool must of course be diminished, since those who had before a right to commonage, would not be able to keep so great a number of sheep as usual. But to this we answer—That whatever may be the case in other counties, yet in this we are speaking of, the quite opposite effects would most probably follow ; and for this obvious reason, the soil of these wastes, as well as common-fields, is strong, and holds the wet, so that cattle are little better than starved ; and the loss annually sustained by the rot in the  
sheep

sheep, occasioned by the wetness of these common-lands, great, and the wool of a very inferior quality; while the inclosing the wastes and the common-fields would be a means of draining them all, and would make them more some and dry; and even without taking any of them into consideration at all, more sheep and more cattle could be kept in the common-fields alone, when inclosed, than now to be met with in the whole district! Many arguments might be brought forward to support the necessity of inclosures; but we shall content ourselves with saying more, and leave the Board to judge whether it be or not.

If it be true that the population of this kingdom has increased to a very great degree, and that the supply of every denomination, as well as live stock of all sorts, is in respect equal to its consumption, it must be at the first importance to discover, by what means the supply can best be increased, so as to answer all the demands for internal preservation; and considering all the circumstances of our country, it is clear, upon the whole of things, that one principal step towards attaining this end would be the inclosing of wastes, inclosing the common-fields, and removing those obstacles which clog the operations of the farmer.

*Rate of Wages.*—The rate of wages in the interior parts of the county, is as follows; yearly servants: head men eight guineas; boys three guineas; day labourers one shilling per day.

In the southern parts ten guineas are given to the head men; four guineas to the boys; and nine shillings a week to the day labourers.

The ploughmen go out at seven o'clock in the morning, in the summer, and return at three in the afternoon. In the winter, from eight to three.

The labourers, in the summer six months, work from six to six, taking half an hour to breakfast, and one hour at dinner; and from light to dark in the winter six months, taking the same time at meals as in the summer.

*Draining of Land, and its Consequence.*—The soil of the dairy farms is, for the most part, a surface of loam upon a bed of clay, and is in many places so wet, as to produce a rank, sour, and unwholesome herbage. Little attention is paid to draining, for want of which (in addition to the sourness of the grass) a great quantity of rushes prevail; the rain, and snow which falls in the winter, cannot pass through this soil with the same facility as if the sub-stratum were gravel, and therefore it frequently lies on the surface and chills the ground; all this is a cause of lessening the value of the land, which cause might be removed at a very moderate expence.

We shall here mention a sort of drain, which has succeeded to admiration, and which will be found simple and cheap, and to last from twelve to twenty years; it requires no other materials than are to be found upon the spot, and may be made as follows: Let a tolerably handy man pare off a sod, or turf, from the top of the proposed drain, a little wider than his spade, and which for correctness sake, may be  
previously

previously marked out by a line; this sod must be in the shape of a wedge, the upper, or grass side, being the narrowest; this is effected by the cutter sloping his shoulders, thus forming the sides. Let this turf be taken off in the length of a foot or eighteen inches, and laid on one side of the drain. Let one spadefull more of mould be taken out from the drain, then use a lesser spade to take out another spadefull of soil; and lastly, take a scoop somewhat narrower than the second spade, and this will form a drain diminishing in width from top to bottom. Let the turf then be placed upside down into the drain as far as it will go, pressing it a little downwards, so as to form like a keystone between the sides of the drain: as it cannot go to the bottom, it must leave a cavity underneath, which will form the watercourse. The upper part may be filled with the mould, and sown with Dutch clover, and rolled. The expence of this will not exceed one penny per yard.

Another mode of draining, or, as it is provincially called, reclaiming of bogs, is now carrying on upon a very extensive scale, upon the Marquis of Buckingham's estate in the county of Bucks. This noble personage is giving all possible assistance and encouragement to every branch of agriculture, and his wishes and intentions are very ably seconded by the attention and industry of Mr. Parrott. The buildings and other erections are conducted upon a neat and improved plan, and will, doubtless, in a short time prove useful to the people of that part of the county. The mode of draining alluded to is this: A well is dug out from six to ten feet deep, and three feet wide, through different strata of soil, until it is cut through the gravel to the quicksands; then with a pump or chine they bore, until a spring is found, which sometimes lie as low as from twelve to eighteen feet below the surface. The water then boils up and continues running, by which the hole is kept open. A hollow drain is then made



rough stones, from the lower side of the well (if there is any inequality, and if not, on that side which is nearest to the ditch or receptacle) into which the water is to be conveyed, and this about nine inches square, or larger, as the case may require; after this the well is filled up with rough stones, nearly to its top, and higher than the top of the drain, and upon these stones is placed as much of the soil which came out of the well as will fill it to the surface, and then it may be sown with white clover, or with grain, and occupied in the same manner as the rest of the field. It is scarcely credible what large tracts of land a few of these drains will completely make dry; and therefore we are happy that we have it in our power to answer in so particular a manner this important question.

*Paring and Burning*—is no where practised in this district that we could discover.

*Woods and Woodlands*—from Marlow to Fingest, and through that space which is bounded by the road leading from London to Oxford, on the south side, and by the River Thames on the north, one sixth part of the land is supposed to be covered with beech wood, and which may yield a profit of from fourteen to twenty shillings per acre per annum. These woods require but little attention, as the old trees shed a sufficient quantity of seed to keep the wood constantly full of young plants. This valuable wood is converted to a variety of purposes, one of which is the affording an abundance of fuel to that part of the county where coals are scarce.

In the parish of Wycombe there are 700 acres of common (beech) woodland. In the neighbourhood of Chesham are large thriving beech woods, under good management. In the parish of Amersham are woods of fine beech, growing upon chalk; and in the beautiful park of William Drake, Esq. there is a variety of thriving timber. The heaths in the parishes of

[Buck.] F Wavendon

Wavendon and Brickhill which formerly were covered with short heath, &c. were some years ago purchased by Colonel Moore of Egginton, who after leaving more than a sufficient allotment for the poor, inclosed the remainder, and planted it with Scotch firs, and other timber trees.

These are at present in a very thriving state, and promise to become of great value: they have already so much altered those formerly barren tracts, as to make them of greater value than any of the farming land in the same neighbourhood. The plantations are now in the possession of his Grace of Bedford, who has, with his accustomed taste, ordered rides to be made through them, which add much to their beauty.

Waddon Chase is divided into several coppices, containing together 2200 acres, part of which is shut up for a certain number of years, and then laid open to the deer, as well as to the commoners, for so many years more. The coppices produce large oak, ash, and other timber, as well as underwood; but from the custom of the deer and the common cattle being suffered to depasture thereon unlimitedly, the young timber is at this time totally destroyed. If the deer were confined to one spot, and the chase and commons divided among the parties interested therein, it would be a very important advantage gained to the proprietors, and a great additional benefit, inasmuch as the growth of oak and other timber would be encouraged. Nine years is the customary time for shutting up the coppices, and then they are laid open for twelve years; and it is lamentable to see the havoc that is made among the young timber the first year these coppices are opened. The produce, under these circumstances, cannot be estimated at above three shillings per acre; but if it were inclosed, and the underwood preserved, and proper steps taken to encourage the growth, it would yield a profit of six shillings an acre, besides providing a valuable supply of fuel and other timber. Large sticks have formerly been sold in this chase for upwards of ten pounds per tree: it is there-

place to another, they are not only obliged to increase the strength to draw that produce, but the increased strength is also a much longer time in performing that journey, than if the roads were good.

All that is requisite in order to remedy the evil here complained of, is to pay a due and scrupulous attention to the expenditure of the tolls, and to take care that the statute duty be in no instance whatever either misapplied, or neglected. A proper system once set on foot is easily kept up, and it must rest with the more opulent men who have leisure upon their hands, to see that such a system be adopted; and that fit regulations once laid down, be strictly enforced.

Having observed to some of the gentlemen and farmers, the great injury which the roads sustain by the too general use of narrow-wheeled waggons, they replied, that with equal propriety they might object to those very broad-wheeled waggons. This doctrine being so much in opposition to the generally received opinion, we were the more desirous of information. They say that these waggons, with eighteen inch wheels, are often times so loaded, carrying from eight to ten ton weight, that ten horses are required to draw them; the materials therefore which are used for the repair of these roads, whether they be flints, stone, or gravel, are no sooner laid on, than these wheels (with this weight) working like mill-stones upon them, reduce the whole, in a very short time, to powder, and before they have had time to cement or bind, to be of any real use to the road. To prove their position, they assert, that since the introduction of these wheels, some of the roads, and particularly that which leads from Fenny Stratford to Stony Stratford, in the immediate tract of these waggons, is sunk or wore down two feet. If that be true, it may arise not altogether from the difference between fourteen inch and eighteen inch wheels, but from the natural defect in the foundation of the road, which may be a bog—and if so, it is accounted for. The canals will, however, in

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a very great degree benefit the roads, by taking off a portion of the weight of the very heavy weights which at present can only be carried on roads carried by waggons, and will materially assist in draining the low and wet parts of the county.

*Farm Houses and Offices.*—The old farm houses, and their correspondent offices, are by no means worthy of imitation; but those erected of late years are upon a better plan, and are generally adapted to the size of the farm: some are built with brick, and covered with thatch, with proper lean-tops; others are built with mud and timber for quarterings, and covered with thatch also. The dairy farms are obliged to have many out-buildings for the convenience of the cattle, as well as for milking; these are methodically arranged over the farm, in order to prevent the fields from being poached by often driving the cattle over them, and also to preserve the milk from that injury which driving them much would certainly occasion. The farm houses belonging to the common fields, are contrived with the same regard to convenience, &c. as the fields themselves. They are frequently placed altogether, forming the appearance of a miserable disjointed street; a sure item of the poverty of the farmers, and their bad system of husbandry.

*Leases, and their Covenants.*—The leases generally run for twenty-one years, confining the tenants to two crops and a fallow, sometimes to three crops and a fallow, interdicting clover and green food; these are principally confined to the common fields. In the southern part of the county, a more liberal extension prevails; the leases run from fourteen to twenty-one years: in a few places leases are granted for three lives; the covenants require that a certain routine of crops shall be pursued in such a way as to prevent the exhausting of the soil; the growth of turnips and rape too, if fed off, clover, rye-grass, and other artificial grasses, tares, potatoes, and cabbages, make a part of the routine.

tine. Generally all the hay and straw are to be on the premises, and all manure, of whatsoever kind, must be laid on the farm, and not be sold, under penalty of twice the value. They also require that not less than a specified number of acres shall be manured annually. Ditches and watercourses shall be scoured annually, and all banks shall be made up in a workman-like manner. All hedges shall be kept in repair, and that no timber like trees shall be cut down, or grubbed up, without the consent of the landlord or his agent in writing.

The house, barns, and offices of every description shall be kept in complete and substantial repair, at the expense of the tenant, who is to have, and to give, notice in writing; the incoming tenant is to be bound for all ploughings, half-ploughings, dressings, &c. at a fair valuation. There are some other covenants such as not to sow madder, weld, flax, hemp, hops, with the usual covenants as to time of sowing and observing certain duties, &c.

*Manufactures.*—The principal manufactures of the district are those of paper and lace. Lace is made in all parts of the county by women and children; and a woman can earn from one shilling to eighteen-pence per week. All these manufactures together do not employ so many hands as to produce any particular effect on the culture of the district.

**IMPROVEMENTS SUGGESTED:**

IN the dairy farms, the ant-hills, which abound in many places in great numbers, require the attentive consideration of the farmer, and should be destroyed without loss of time. Many farmers, wedded to old customs, without being able very often to assign a plausible reason for their adherence to them, have with much seeming confidence assured us, that a greater quantity of grass was produced by their being there, than there would be if there were none; and that they are of opinion the grass springs earlier on the south side of those hills than it does upon the plain surface; and lastly, that they afford shelter to the young lambs. But the generally received opinion among men of discernment, is directly in opposition to this doctrine; they assert that the cattle will not touch the grass that grows on these hills, until they are starved to it, as it consists principally of coarse bent grasses and *thymus serpyllum*, and which are produced from the dry and loose state which these hills are generally found to be in. Besides, it is impossible to mow grass land in this state. Were the lands properly and regularly rolled, with a heavy roller, once or twice a year, they would be less liable to be molested by such encroachments. The methods that have been used to destroy them are as follow: The turf being pared off, the soil that composed the hill is scattered upon the surface, leaving the ground level, and then the turf is replaced. Another method (differing from the former only in this) is, instead of replacing the turf, to sow the ground with seeds. But experience shews us that both these ways have answered no good purpose, since in those very fields which were so treated several years ago, almost every spot is still visible where the ant-hills stood, nor is the herbage on those spots either so abundant, or so good in quality, as in the other parts of the

full, notwithstanding every attempt to reclaim  
 manure: from which it appears that there is some  
 contained in those hills which is noxious to vege-  
 which it is the business of the farmer to remove;  
 our opinion will be best done in the following way  
 the hills be entirely taken away level with the g-  
 removed to some situation where they can remain  
 time. A sufficient quantity of lime and dung are  
 ed with them, and turned over several times dur-  
 ter, and always left rough: this the repeated turn-  
 positions will correct, incorporate, and pulverize.  
 where the ant-hills stood are to be turned up, a-  
 and left as rough as possible, in order that the sun,  
 snow, and rain, may have the greater influence  
 soil. This operation must be begun either in Aug-  
 tember. In the beginning of March following  
 found that the soil is in a mellow state, the comp-  
 dung, &c. may be laid on each of the vacant  
 worked up with the spade, and according as the sea-  
 may be sown with white clover, trefoil, and hay-  
 quality of the seed be good; and lastly, let the  
 be well bush-harrowed, and rolled with a very heavy  
 The next improvement is evidently the draining-  
 which, as we have before shewn, are in many places  
 want of it; but as we have pointed out, under its pro-  
 the modes by which that may be done, nothing need  
 added here, than that it is of the greatest importance  
 it done effectually--the cultivation of lucerne and  
 upon the dairy and grazing farms, the growth of  
 foine upon the arable farms, but particularly where  
 soil is a tolerably deep loam, and the substratum  
 In our Report of Surry, we laid down the pro-  
 what appeared to us, from our own observations  
 best mode of cultivating this very valuable grass  
 since had opportunities of conversing with several farmers  
 have been in the habits of growing it in very large

and we find that their practice accords with our observations : and which is nothing more than sowing it in drills, two feet row from row, on a soil well prepared, depositing the seed very shallow, and having the ground between the rows repeatedly hoed. If the land be very stiff, Macdowgall's hand-hoe should be used in preference to a horse-hoe, because the treading of the horse may harden the ground, whereas the other will effectually cleanse, loosen, and pulverize it. Sheep are remarkably fond of this grass. Oxen and cows are said to fatten fast upon it, especially if given to them just before it comes into blossom ; and made into hay, perhaps no food will enable working horses to go through more fatigue all the year round than this in question. The seed of it is also recommended as a substitute for oats, which it is said to exceed in the proportion of two to three. Upon the whole, then, we cannot but earnestly recommend a more general cultivation of this plant, since it has proved so valuable an acquisition to the county we have just alluded to.

Lucerne should also make a part of the husbandry of the dairy and grazing farms, and which should likewise be sown in drills, in preference to being broad-cast, as by the former mode, the plants get much stronger, yield more, and enable the farmer to keep his land clean. If the covenants in their leases will admit of it, perhaps Sir William Lee's rotation of green meat may be well worth the attentive consideration of the dairy and grazing farmers. At all events, prudence should suggest to them the propriety of being provided with a succession of resources in case of very severe winters ; and those alluded to, are, according to this experienced gentleman's accounts, not only very salutary to the cattle themselves, but also give a decided superiority to the quality of the butter.

We have observed in many parts of this district a large pond, either in the farm yard, or so near it, and so low, as

[Buck.] to



to drain the greater part of the moisture from the dung; by which means the dung is kept in a dry state, and requires to lie a considerable time longer before it can rot; it consequently becomes deprived of a great portion of those saline particles which are the pabula of plants; and so efficacious a property in all manures; and this is no unimportant consideration upon a large farm, which can always consume more manure than it is in the power of the farmer to make. Besides which, can any thing be more filthy and detrimental to the cattle than to suffer them to drink out of such a compound of nastiness? But this county is by no means singular in this oversight, for we have observed and regretted it in various other parts.

We must likewise add, that such water is not even fit to wash the legs of the horses after their return from work, as it must communicate a certain portion of its filth to their heels, and thereby promote the disorders to which horses in those parts are so very subject. To obviate this error, we would recommend, in the first place, that the yard for holding the dung be somewhat like a bowl, not deep, but gradually and gently sloping, in order to draw all the drainage of the yard into its center; the straw that is thrown out from time to time, will, as it becomes trodden about, receive all the benefit of the moisture, and by being frequently turned will the sooner rot. To this yard dung may be added the mud out of ponds and ditches, together with the leaves of vegetables which are found in a state of putrescence to contain a certain portion of vegetative salts; chalk, the scrapings of roads, and ashes, &c. These, by being turned over two or three times at different seasons of the year, impart to each other a portion of their vegetative properties, and combine a quality of manure superior to the immediate powers of any one of them individually.

We have in the introductory part of our Report offered

few hints as to manures, in general ; but there is one custom which we have observed in particular spots of this district, in regard to liming and marling, on which we must animadvert. It is usual in those places to lay the lime and marl in heaps, with a view to expose them to rain, frost, and snow, and to their undergoing all the solution necessary to prepare them for fertilization. Now, in our opinion, this practice must fall very short of the end proposed. For if such exposure of these manures to air and water be necessary for a part, it must be necessary for the whole ; whereas it is clear that the surface only of each heap can in the present instance be affected by those elements, while the greater bulk remains without receiving any benefit at all. We would therefore recommend, that instead of the lime and marl being laid up in heaps, for the above purpose, it be spread over the field as far as it is intended to go, and then it will be all prepared alike.

As so large a proportion of this district is in dairy farms, and as we have shewn in its proper place, that these require a number of buildings of different descriptions, to carry on that kind of business, might it not be prudent on the part of the landlord, upon the granting or renewal of a lease, to compel each tenant to plant and protect a certain number of trees, such as oak, ash, elm, able poplar, &c. in the hedge-rows, and other convenient places, to be ready, as occasion may require, to be applied to all the purposes of those buildings. This surely deserves consideration, and we cannot but regret that such an idea seems in a manner abandoned in the late inclosures ; which is indeed rather surprising, as those who object to timber trees in hedge-rows round an arable farm, acknowledge that they do no possible injury in those hedges that surround pasture land.

With regard to the stock of the district, the opinion universally prevails, (as we have before observed) that until the open fields, as well as the wastes, shall be inclosed, and the

humidity

humidity of the soil reduced to a state of aridity, by draining, and that a greater liberality of cropping is allowed, it will be in vain to think of changing the breed of the sheep.

The cows, oxen, and hogs, have each their peculiar merits, and appear, upon particular inquiry, to be as well adapted to the ends proposed by keeping them. As North Wiltshire and Suffolk cows are famed in their respective districts, for certain good qualities, we wished to ascertain by inquiry whether or not either of these, or a mixed breed might not be introduced with a prospect of advantage? Farmers who are generally opinionated, little information could be expected; but those reasons that were assigned to us, were to the following purport: The long horned, or North-Wiltshire cow, is a larger animal, but does not give more milk, nor is her milk so productive of butter, that she requires more food, and in a state of barrenness takes a longer time to calve. With respect to the Suffolk breed, or polled cows, it is admitted that they yield a larger portion of milk, but the proportion of cream is not greater; and as they do not cultivate either cabbages, turnips, or saintfoine, as a dependence, so these are found to fall off more or less, as the winter season is more or less severe. How far these reasons are conclusive, these farmers ought to be the best judges.

Salt has been strongly recommended to us as an antidote against the rot in sheep.

We have, in the answer to the query on woods and wet lands, lightly noticed the plantations on Wavendon Heath in common with the other woods; but on reconsidering the subject, we think the improvement of that heath of much consequence to the general agriculture of the county, to deserve a more particular description. With permission therefore of the Board, we shall state that in the parish of Wavendon there is a heath containing 742 acres, whose soil is composed of various coloured sands of great depth, but

the inclosure which took place a few years since, could be estimated at more than two shillings an acre, being covered with short heath only, which was cut by the poor for fuel, and was thought so barren as to be incapable of any improvement. But Colonel Moore of Egginton, by his much judgment, personal attention, and perseverance, has changed this once miserable spot to a beautiful sylvan grove.

At the same time that we mention its ornamental beauties, we can also with much confidence say, that in a short period it will become more profitable to the proprietor than any of the farming land in the neighbourhood. Being possessed of indisputable facts, we are enabled to speak to its present improving state, and also to judge of the great advantage that may be derived to that part of the county, not only from the shelter which these plantations will necessarily afford, but also by the great quantity of fuel and timber that will be increased, benefiting the country, in proportion as the quantity each produced is of great value, and that which was produced before was of none. As this kind of soil is generally accounted barren, we think it necessary to state in this place, that the observation is worth recording in every survey throughout the kingdom, particularly in Surry, what are at present growing upon this soil, which in some parts is superior even to Bagshot Heath.

Nineteen acres of Wavendon Heath were inclosed and planted with three-year old Scotch firs, in the year 1778, and the number amounted to 51,376, for which the Honourable Society of Arts, Manufactures, and Commerce, &c. bestowed on the Colonel the honorary premium of the gold medal. The plants thrived uncommonly well, and have been cut out at various times, which thinnings were converted into faggots, and sold for one guinea per hundred. No exact account was kept of the money received for these thinnings; but

but Colonel Moore's assurance will not be the less doubted, when he declared that they have very considerably more than repaid him all his expences of inclosing, planting, &c. The number now remaining in a very thriving state, are 17,125, and are from twenty to twenty-eight feet in height, (along one valley they exceed thirty-five feet in height) and are worth, upon a very moderate estimation, the sum of 684*l*. It must likewise be noticed, that the increasing value, from their present growth, advances in a much more rapid manner than it did while the plants were young. In one part of this property is a fuller's earth mine of great extent and value.

The extent of this heath, as we said before, is about 742 acres; 300 acres of which were allotted, upon the inclosure, for the use of the poor. Several acres of similar soil, Colonel Moore has sown with French furze, which is cut every third year. In order to come at the value of an acre of this crop, we measured a rod of ground, and the faggots cut therefrom amounted to 30, which multiplied by 160 gave 4,840; but as six score are allowed to the hundred, it reduces the number to 3,840, which at 8*s*. a hundred give 15*l*. 17*s*. 2*d*. deduct 2*l*. 8*s*. 0*d*. the price for cutting and tying the faggots, &c. 8*s*. more the rent of the land, and it will leave a profit of 12*l*. 11*s*. 2*d*. for one acre for three years, or 4*l*. 3*s*. 8½*d*. per acre, per annum. The common profit attached to land employed in the growth of furze, can seldom be estimated so high, as very little care is paid to such crops, although it is here proved beyond dispute to be a very profitable one; but very greatly so if the land is considered. It may however be owing partly to the time and partly to the mode of cutting it, which shews that no crops can be profitably cultivated without some attention. It is cut in February, and much caution is observed in seeing that the men have good tools, each man being provided with three fresh ground every morning. The instruments are applied as close

to the ground as possible, and the stem of the furze cut clean off, with the edge of the tool turning upwards. The Colonel suffered a part of one of these fields to be cut in the usual way, viz. cutting it within four or five inches of the ground indiscriminately, and the stubbs left ragged, by which the sun, wind, and wet penetrated and destroyed a great number of the plants. The evident superiority of the Colonel's method over the other is very manifest. The same observation holds good with respect to the cutting of underwood. Quickset hedges, cut down in the same way upon this poor sandy soil, made shoots the first year after cutting, from three to five feet high, and in number from five to twenty from each stool. Holly on the same soil made shoots of twelve feet high in three years.

**OBSTACLES TO IMPROVEMENT**

AS the obstacles to improvements in agriculture, in a general sense, are not merely local, when that similar circumstances may be observed in different districts, and the same arguments be used in proving them, by those several gentlemen who have been employed by the Board.

Those circumstances will not deserve less attention, if the arguments have less weight, if it should be contrary, it will be a convincing proof that such exist in a very serious point of view, or else so many, so widely scattered, and without any knowledge previous communication with each other, could not have noticed them.

Without considering what may be the obstacles elsewhere, it is our business to point out such in the county under consideration. And we flatter ourselves we have in fact pointed them out already, in this Report; and also shewn how they may be removed. We shall, therefore, as we wish not to make tedious by a repetition of the same arguments, confine ourselves with just recapitulating what appears to be the main obstacles to improvements in this county.

They are:

1. The want of inclosures, both of the waste and common-fields.
2. The neglect of the magistrates to enforce the laws and legal care of the high-roads.

3. Short leases, with those ridiculous restrictions laid upon the tenant with respect to crops.

And lastly, The uniform inconveniency of the present system of the tithe laws.

On the three former we have given the opinions of those gentlemen and farmers with whom we have consulted, (in conjunction with our own) under their respective heads, to which we beg leave to refer; and to conclude this Report with a few hints upon tithes.

We take the liberty to quote, in this place, the words of a justly celebrated writer (Dr. Adam Smith) whose observations upon agriculture are extremely apposite in a discussion of the points in question.

"The rent of land," says he, "it may be thought, is frequently no more than a reasonable profit or interest for the stock laid out by the landlord upon its improvement. This, no doubt, may be partly the case upon some occasions; for it scarcely ever can be more than partly the case. The landlord demands a rent even for unimproved land, and the supposed interest or profit upon the expence of improvement, is generally an addition to this original rent. Those improvements, besides, are not always made by the stock of the landlord, but sometimes by that of the tenant. When the lease comes to be renewed, however, the landlord commonly demands the same augmentation of rent as if they had *bona fide* been all made by his own."

"The rent of land, therefore, considered as the price paid for the use of the land, is naturally a monopoly price. It is not at all proportioned to what the landlord may have laid out upon the improvement of the land, or to what he can afford to take, but to what the farmer can afford to give. Again he says, "the rent of land not only varies with its fertility, whatever be its produce, but with its situation, whatever be its fertility."

{Buck.}

H

"Good



"Good roads, canals, and navigable rivers, by diminishing the expence of carriage, put the remote parts of the country more nearly upon a level with those in the neighbourhood of the town. They are upon that account the greatest improvements. They encourage the cultivation of the remote, which must always be the most extensive circle of country. They are advantageous even to that part of the country. Though they introduce some rival commodities into the old markets, they open many new markets for produce."

And in treating upon the effects of inclosures, he says, "The advantage of inclosure is greater for pasture than for corn; it saves the labour of guarding the cattle, which is better too when they are not liable to be disturbed by a keeper or his dog. It is convenient also for the maintenance of the cattle employed in the cultivation of the land, and its high rent is, in this case, not so properly paid for the value of its produce, as from that of the corn lands which are cultivated by means of it."

But these are not the only obstacles to the common husbandry; the slovenly operations of one man are very often of serious consequence to his neighbours, with whose property his lands may lie, and generally do lie very much intermixed. Every one is aware of the noxious quality of weeds, whose downy and winged seeds are wafted by the wind, and are deposited upon those lands which are contiguous to them; and which before were perhaps as fertile as the nature of them would admit, to the manifest injury of the careful and attentive farmer. Inclosures would, to a certain degree, lessen so great an evil: they would also prevent the inroads of other people's cattle, as particularly in the parish of Wendover, and in which one man held sixteen acres in thirty-one different allotments.

Having pointed out some of the obstacles to the common-field husbandry, we proceed to those of the wastes. From what has been said in answer to its respective query, it will appear, that in some instances, such as the expence and difficulty of obtaining bills of inclosures, the badness of the roads, &c. the same arguments that are used as to the common-field will here apply also. But as the property and right of commonage of both differ, so also will the difficulties vary.

We have endeavoured to make it appear, that it is impossible, taking one waste with the other throughout the county, that cattle indiscriminately can live more than seven or eight months in the year upon them; indeed when we say live, we exceed the matter of fact, it is no more than a state of bare existence, and therefore they do not improve: this being the case, these commons cannot be worth, perhaps, a fortieth part of inclosed land. If we make out this argument satisfactorily, and as the right of commonage is nearly if not entirely nominal, the land-owners would, without one acre of common, get the same rent for their land that they now do with it; and if so, are not all those wastes just so much loss to the community? Most certainly they are; but how will they be remedied? Why, remove the obstacles from the common-fields by inclosure, and these will furnish an ample return of grain, and then the difficulties that are now in the way of inclosing the wastes, will be the more easily surmounted. It will follow, that each of these (that is, common-field and waste) deserves the first consideration of the Board: their importance is strongly, and we trust clearly pointed out, in our dissertation upon those queries that applied to them.

It has been observed, that in the northern part, so careless are the farmers in cleaning out the ditches, and keeping open the drains and other watercourses, that however disposed

some may be to carry on so desirable a work, and by doing all the part of good neighbours, (not to notice good example its sets) yet, while one or more obstinate men persist in their refusal to do the like, the end which a prudent farmer had in view of draining his land, is perhaps entirely frustrated, and the difficulty to persuade or enforce a compliance therewith, is a very material obstacle to improvements. In all cases, therefore, where these obstacles persisted in, whether through obstinacy or from any other cause, the magistrates might be empowered to receive allegations of the parties aggrieved, and order such steps to be taken in the premises, as to them shall appear right.

*Tithes* are every where considered as a leading obstacle to improvements in agriculture; and although there are very few instances, indeed, in this county, where any point of difference has arisen between the clergymen and their parishioners, yet as that only proves the force of custom and local circumstances, it does not in the least take away from the established truth of tithes being a great grievance in the hands of lay impropiators. On the contrary, daily experience shews us that commuting of tithes, even at a very advanced price, is seldom acceded to by laymen; and the difficulty, not to say unreasonableness of paying for every improvement in kind, is attended with great personal inconvenience, and considerable public loss.

The farmer who goes on in the old beaten track of his ancestors, pays but a very small proportion, compared to a man who aims at improvement; to obtain which, he is necessarily at greater expence, and if his produce is proportionate to his expence, in the same ratio does the burthen of tithes increase also: this is a most vexatious grievance, in no other instance whatever is there a parallel circumstance.

Is the ingenuity of the mechanic, (be it in what line it may) subject to such oppression, at least in such a degree, as to deprive him of a considerable part of the profits arising from his ingenuity, although that might be said to come within the meaning of personal tithes? Why then (if the enforcing of these is thought to be an obstacle to the improvement of every art) are predial tithes allowed to stand in exception?

Besides, so undefined is what constitutes great and small tithes, that the farmer is frequently at a loss to know to whom the tithe is due, whether it be to the rector, or whether it be to the vicar; and hence fresh difficulties and fresh perplexities present themselves to him, and not unfrequently to them.

Formerly the balks, meres, stubble, and aftermath, were considered by the common law and custom of the realm as not titheable, but modern determinations have settled the contrary.

It may be laid down as a position, that whatever profits arise to the cultivator of the soil by the force of superior ingenuity and industry, should be held sacred both by the church and government. For if it is otherwise, it discourages the improvement of the soil; and thereby the church prevents the future increase of her tithes, and the government prevents the future increase of its taxes.

The tithes, therefore, as exacted in some places, is, to all intents and purposes, as great an obstacle to the improvement of agriculture, as the taille had used to be in France.

Land-owners occupying their own lands are generally disposed to try experiments, and they can best afford to do it. If those experiments succeed, the community are benefited; and if they fail, the loss may possibly be moderate, and will affect only themselves: but if they succeed, and that profit

is to be taxed one tenth, it is, to all intents and  
drawback upon industry.

The landlord cannot, therefore, venture to make  
important, which are generally the most expensi  
ments; nor the tenant raise the most valuable  
likewise the most expensive crops; so long as  
which adds nothing to the expence, runs away w  
a share of the profits.

In whatever point of view tithes are consider  
it be in the hands of the clergy, which is plac  
the best situation, and where they were origin  
to be; or whether they are in the hands of  
proprietor, who, generally speaking, has no o  
in the parish, and therefore less mindful of bein  
terms with the inhabitants; they are in either  
obstacles to every improvement upon agriculture

CONCLUSION.

IN drawing out this Report, a variety of combinations presented themselves; in some of which we have been minutely particular, and in most of them diffuse. If, from what we have stated, any good shall arise to individuals (and consequently to the community, which must in a certain degree be benefited) we shall feel a particular gratification, that under the auspices of a Board composed of the first characters in this kingdom, our humble endeavours have answered some good purpose, in aiding and extending the views for which that honourable Board was appointed; and promoting the benefits, which, we have flattered ourselves, may be derived to the public from its institution.

FINIS.







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GENERAL VIEW  
OF THE  
AGRICULTURE  
IN THE COUNTY OF  
CAMBRIDGE

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**GENERAL VIEW**  
**OF THE**  
**AGRICULTURE**  
**IN THE COUNTY OF**  
**CAMBRIDGE;**

**WITH OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.**

**BY**  
**CHARLES VANCOUVER.**

---

*G. I. Pitt*  
**DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE  
INTERNAL IMPROVEMENT.**

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**LONDON:**  
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## PART I.

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## JOURNAL.

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### *ASHLEY including SILVERY.*

THE arable land included within these bounds, lies in thirteen open fields; that part of which binding east upon the village, is a dry, thin, stapled, chalky soil; on the north, a wet, heavy clay, with a mixture of some gravel, well stapled upon a gravel and chalk; on the west, a tender clay or loam, well stapled upon a clay; on the south, a stiff, heavy, wet clay, upon a gault; to the eastward of which, the soil gradually opens, and forms a good mixture of a fair staple, upon a clay, but which is finally lost in the thin chalky soil first mentioned. The whole contains about two thousand four hundred acres, including one hundred acres of heath sheep walk, and taken together, is rented at seven shillings and six-pence per acre. The enclosures in severalty, which are improved, amount to about sixty acres; and are rented at twenty shillings per acre: those that are in a rough and unimproved state, amount to about ninety acres, and are rented at ten shillings per acre. The stiff heavy lands in the open fields, as also those in the enclosures, lie well for raising; but this material improvement is much neglected.

The whole of the arable crop and fallow, pay-  
 tation for the tythes, of two shillings and four-  
 acre. The rotation of crops, first, fallow, and  
 sheep fold; second year, wheat barley, rye, and  
 turnips for sheep food; third year, barley, oats,  
 a small quantity of clover, and trefoil, for sheep  
 duce per acre, taken on a average of five years,

Wheat 18 bushels,

Barley 20 ditto

Oats 14 ditto

Rye 14 ditto

Peas 20 ditto.

The largest farm in this district is occupied un-  
 der twenty-one years, at two hundred and forty  
 ann. the rest of the farms are held at will. No  
 artificial manure, or foreign composts, are used.  
 The parish contains thirty-six houses, forty families,  
 allowing five to each family, two hundred souls.  
 The rent is three shillings and sixpence in the pound. One  
 thousand three hundred sheep, of the Norfolk breed, are  
 a growing disease prevails, equally alarming with  
 though these sheep walks, are happily free from  
 mity; the first appearance of which, is indica-  
 wool changing to a brown colour; and as the  
 advances, drops off at the roots, and leaves the  
 clean and naked. At this time, the animal is  
 extremely uneasy, constantly rubbing its head  
 against hurdles and fences, and scratching its back and  
 horns, starting suddenly, running a few steps, and  
 down, where it will remain a short time, and  
 and begin feeding, as if in perfect health. The  
 perfectly free from eruption, or other appearance  
 nor are there any traces of the disorder disco-

examination of the entrails, the body, or head of the animal; and as no instance of a cure has occurred, in any of the surrounding parishes; and moreover as this disorder is considered to be infectious, the sheep are usually killed on the appearance of the first symptoms; though some have been known, to have languished under its fatal influence, for ten or twelve weeks together. In the parish of Dallham in Suffolk, which is distant only a few miles from hence, out of a flock of five hundred sheep, the owner sold last year, as many skins at ten-pence each, as amounted to ten pounds; every sheep of which, was either killed in consequence of, or perished by this disease.

It is evident from the great variety of soil in this district, that the several parts of it require a separate and distinct treatment. The thin chalky soil, is unquestionably proper for the culture of cinquefoil and trefoil, and though not perhaps certain, good turnip land, worth the annual trial for this crop. The heavy clays to the culture of clean peacans, wheat and clover. The tender clay, or loam, to that of barley, wheat, oats, peas and clover; and the mixed soil, (as the water may be more or less at command) to the Norfolk broad cast, or the Scotch two furrow turnip husbandry.

The draining of the land, and the culture of these several crops, would be the certain consequences of the common field being laid into severalty; and this arrangement is much wished for by the most intelligent farmers in this parish. The rough pastures are capable of being improved, to an equal value with those at present of the first quality, by previously hollow draining, and opening the soil with the plough; but under the present circumstances of the district, no improvement can be made in its stock or husbandry.

CHEVELL



## CHEVELY.

**T**HE arable land in this parish, lies chiefly in open the soil of which may be divided into three distinct about two-fifths, a stiff heavy clay, of a good staple, gault, and proper for the culture of wheat, beans, oats, and clover; a like proportion of it, is a mixed clay, and gravel, of a tolerable staple, upon a gravel adapted to the culture of wheat, barley, oats, p beans mixed, and clover; the remainder about one of a dry, thin staple, upon a chalk or gravel. The contains about three thousand acres, and is rented average, at about ten shillings the acre.

There are about two hundred acres of heath shee adjoining Ashley, which are valued at half a crown p The enclosures in severalty, (exclusive of the D Rutland's domain, which contains about three acres) include about thirteen hundred acres, a cons part of which, is rough pasture ground, of a wet and clayey nature, and which in its present state, valued at seven shillings and sixpence the acre; such pasture grounds, as are improved, are rented at eighteen shillings the acre. The enclosures (except towards Saxham Street, which are rather flat) as the open field land, lie well for draining. No artificial manures, are made use of, and the usual practice of the country, of two crops and a fall, obtains in the

field, the produce of which, taken on an average of five years, is

Wheat	20 bushels per acre
Barley	20 ditto
Oats	22 ditto
Peas	20 ditto

The largest farm in the parish, is three hundred pounds, per ann. and like all the rest, is held at will. Five hundred Norfolk sheep are here kept, and the Suffolk breed of cows, is generally preferred: amongst this latter stock, the red-water, and garget, prevail very much. There are forty-five houses, seventy families, three hundred and fifty so is. The poor's rates are three shillings in the pound, and the tythes are all taken in kind.

The drainage of the stiff, wet, lands in the open field, would be certain, and readily accomplished, were those lands, in severalty; an improvement, which by most of the intelligent people in this parish, is much desired. The rough pasture grounds, might be improved, to a rent of fifteen, or twenty shillings the acre.

The destructive practice of paring, and burning, these highland pastures, has unfortunately been adopted in this neighbourhood, and in its consequences; confirmed the dislike, which landlords generally have, to the breaking-up, of old pasture ground. Unless the wet, cold, close clays, are hollow drained, and opened with the plough, to the emeliating influence of the sun, the frost, and the atmosphere; all expectations of improvement in the herbage, and consequent breed of cattle, must cease; whilst the husbandry in the open field, which requires a system of management, as various

various as the nature of its soils, must also remain at a stand until the intermixed property be laid together, and the rest of shackle and sheep-walk be done away.

N. B. About one hundred pounds per ann. in this parish, belongs to *Trinity College, Cambridge.*

### CATLIDGE.

THE soil of the common open fields in this parish which lie in three shifts, consists of a close, cold, and compact clay, lying upon a very retentive yellow clay, bluish coloured gault, proper for the culture of wheat, clean beans, black oats, and clover. The whole lies well for draining, but at present, is much neglected; it contains about eighteen hundred acres, and is rented, at eight shillings per acre, to which is to be added, the tythe of three shillings per acre on the crop and fallow. The meadow, or half-yearly land, which produces a very good and spontaneous herbage, contains about a hundred acres, and is rented, at twenty shillings the acre. The soil of the enclosure is of a more tractable nature, than that of the open field, and applicable to the culture of wheat, barley, oats, peas, and beans mixed, and clover; these contain about a thousand acres; two hundred acres of which, or thereabouts, are improved pastures, and valued at twenty shillings per acre; whilst those that remain in an unimproved state, are in a great degree covered with rushes, ant-hills, old pollards, black and white thorn bushes, and brambles; and their most value does not exceed ten shillings per acre; the enclosures all lie well for draining, and generally upon chalk.

chalky, and yellowish coloured clay, of an alkaline quality. The largest farm in this parish, is three hundred and eighty pounds per annum. Common farm yard, and stable dung, the only manure in use, and the produce per acre on the usual average, is

Wheat	20 bushels, weighing 62 lb. per bushel.
Barley	30 ditto of the second quality.
Black Oats	24 ditto
Peas and Beans	20 ditto

There are about six hundred Norfolk sheep kept in this parish, which are occasionally subject to the rot. The Suffolk breed of cows, being quite equal to the strength and present herbage of the soil, is preferred. There are seventy-four houses, eighty-four distinct families, and four hundred and twenty souls. The vicarial tythes, are paid by a modus of eighteen pounds per ann. from the parish, to which is yearly added, ten pounds, by Lord Guildford. The poor's rates are three shillings in the pound; and the second time and harvest, later than in the neighbourhood of Newmarket, owing to the neglect of draining.

### WOOD-DITTON.

THE land extending towards Newmarket (a part of which town lies within the bounds of this parish) consisting of a thin, dry, white soil, upon a chalk, and a light sandy soil, abounding with flints, upon a gravel, proper for the culture of cinquefoil, and the broad cast turnip husbandry, contains about one thousand five hundred acres, and is rented, on an average, at eight shillings per acre. The land

land lying towards Chevely, Catlidge, and Stack, consists of a strong, heavy soil, upon a white clay, or gault, proper for the culture of wheat, black oats, and clover; contains about one thousand acres, and rented at eleven shillings per acre.

The pastures in severalty, which are improved to a degree, contain about four hundred acres, and are rented at sixteen shillings per acre. The coarse, and totally unimproved pastures, amount to about two hundred acres, and are usually valued at about 8s. per acre. About six hundred and fifty acres of heath sheep walk, extending to the binding upon, the town of Newmarket, valued at ten shillings per acre. The pastures, as also the stiff heath in the open fields, lie in general, well for draining; the soil is of so close and retentive a nature, as to require drains of the little hollow ditching, (which is done much nearer than they are, or would be necessary, if the soil were more porous and drawing soil: the whole, however, at moderate expence, may be considerably improved.

The largest farm is occupied under a lease of six guineas per ann. which, under the common husbandry, produces two crops and a fallow, produces in common, with the other farms of the parish, of

Wheat 18 bushels

Barley 24 ditto

Oats 24 ditto

Peas 16 ditto

Rye 18 ditto

About two thousand one hundred and twenty of the parish, fifty-two houses, sixty families, three hundred souls—poor's rate four shillings.

STACK

*STACKWORTH.*

**T**HE open field, arable land, lying north of this village, adjoining thereto, and bounded by the Devils-ditch on the east, and the lands of Dullingham on the West, consists in part, of a brown loam of a slight staple, lying upon a thin stratum of chalk, under which is a close, compact, and white clay : this part of the field contains about an hundred acres, and is proper for the culture of wheat, barley, oats, peas, and clover. The next, in point of quality, is of a light coloured, chalky, dry nature, thinly stapled, and lying upon a chalk, adapted to wheat, barley, oats, rye, cinquefoil, and turnips, and comprehends about two hundred and fifty acres. That of the third quality, and binding upon the heath, is of a light, sharp, red, sandy nature, of a deep staple, lying also upon a chalk, and applicable to the broad cast turnip husbandry : it contains about six hundred and seventy-two acres, and taken with the rest of the open field arable land, is rented at about seven shillings and sixpence the acre. The heath is valued at two shillings per acre as a sheep-walk, and contains about eight hundred and fifty acres. There are about one thousand acres of enclosures in severalty, of which about one hundred acres are improved pasture lands, and are rented at fifteen shillings the acre ; the rough, and unimproved pastures, comprehend about three hundred acres, are valued at ten shillings per acre, and the remainder of the inclosures, which are rented at fourteen shillings per acre, are under the plough.

The largest farm in this parish, is under a lease of twenty one years, rented at two hundred and fifty pounds per annum; the rest of the farms in the parish are held at will. The common farm yard, and stable dung, together with sheep folding, and foreign composts, to the extent, and expence of thirty shillings per acre, are here in general use. The common husbandry of two crops, and a fallow, obtains in this parish, and the average produce.

Wheat	22 bushels
Barley	22 ditto
Oats	26 ditto
Rye	18 ditto
Peas and Oats	26 ditto per acre when sown together

There are twelve hundred sheep kept in this parish, which are supported through the year, by the range upon the heath, the shackle of the common fields, and a small portion of trefoil, turnips, and rye, sown for spring food. A considerable part of this parish, of Wood-Ditton, of Catlidge of Chevely, and of Ashly, is well adapted for the growth of oak timber. In this parish, there are about three hundred and thirty-five acres of oak-woodland, the under-growth of which, consisting of hazel, ash, black and white thorn, fallows and maple, in the moist places, is felled every twelve years, and produces from eight to ten pounds the acre. In this parish, reside sixty families, three hundred souls: poor rates annually amount to half a crown in the pound, exclusive of a donation of thirty pounds, payable out of an estate in the parish: the tythes are all taken in kind.

The useful practice of hollow draining, is here attended to, and much more would be done to the great improvement of the heavy wet lands in the parish, were the intermixed  
land

lands in the open fields, laid together and exempt from shackage. It perhaps may be worthy of remark, that the thin chalky soil, when properly ploughed, and in good heart, produces an excellent sample of wheat; and in a moist, kindly season, a fair quantity.

### *DULLINGHAM.*

**T**HE arable land in this parish, lies in three common field shifts, the soil of which, is to be described under four distinct heads: that of the first quality, a heavy, whitish, clayey soil, of a good staple, lying upon a clay, and proper for the cultivation of wheat, barley, oats, clover, and peas: the second, of a reddish coloured brick earth, of a firm deep staple, upon a stiff brown clay, proper for the culture of wheat, beans and peas mixed, clover, and black oats: the third, a brown mixed soil, of a very good staple, upon a gravel, part of which is moist, and proper for the culture of wheat, with all the former crops, and the scottish two furrow turnip husbandry: the fourth, is a dry, thin, white, chalky land, adjoining to the heath, and when properly managed, may be adapted to the cultivation of wheat; barley, oats, rye, cinquefoil, trefoil, and turnips. The whole contains about thirteen hundred acres, and, taken on an average, that which is tythe free, is rented at ten shillings; that part which is subject to the payment of tythes, at seven shillings; and about forty acres of enclosed pastures in severality, which lie in, and near the village, are valued at twenty shillings per acre. The inferior pasture land, and that which is arable, containing about sixty acres, are valued at about ten shillings per acre. The soil of the  
enclosures,



enclosures, is a black tender mould, upon a clay, a mixture of which, would much strengthen and improve the surface. In this parish, are three hundred acres of heath, which is valued as a sheep walk, at three shillings an acre.

The whole of this parish is held at will, and the largest farm is two hundred and fifty pounds per ann. Besides common farm yard dung, and that from the stable, several light composts are used, to the expence of about thirty-shillings the acre. The mode of husbandry, two crops and a fallow; and the general produce per acre, is

Wheat	20 bushels
Barley	20 ditto
Oats	20 ditto
Peas and Beans	17 ditto.

There are fourteen hundred sheep kept in this parish amongst which, in the summer season, a garget, or green, appears between the flesh and the skin: this disease has hitherto, been considered incurable, and always proves fatal.

As the sheep walks in this country, are commonly valued at the rate of twenty shillings per score sheep per ann. fourteen hundred sheep, or seventy score, this would amount to seventy pounds. The shackage of the common fields with all the clover, trefoil, rye, and turnips, that the flock-masters sow for spring food, cannot be estimated at more than twenty-five pounds a year, which bears no proportion to the injury done by these sheep walks over the open fields, and which the most sensible people, resident in the parish, are extremely anxious should be discontinued. The village contains about seventy-eight houses.

houses, ninety distinct families, and, by computation, four hundred and ninety-five souls. The poor's rates are three shillings and six-pence in the pound, exclusive of a donation of thirty pounds a year. In this parish, a rental of twenty pounds per ann. belongs to Clare College in Cambridge.

### *BURROUGH GREEN.*

**N**O information could be procured here: the enclosed lands on the way from Dullingham, are wet, rough, and ill managed; near the village, a tender, hazel coloured loam, with a small mixture of sand.

### *BRINKLEY.*

**N**O information. The warm, tender, loamy soil, continues down the field, and across the brook, when the country rises at

### *CARLTON,*

where, likewise, no intelligence could be procured. The surface here, is of a lighter colour than in the preceding villages, and strengthens upon the hill to a whitish compact clay, which prevails through the parish of

### *WESTON COVILLE,*

becoming however still lighter, until it terminates in a thin, dry, chalky soil, binding upon Newmarket Heath.

It is much to be regretted, that the full and complete information, which the enclosure of this parish about twenty years since demanded, could not be obtained; a present flourishing appearance, and a short conversation had with one of the principal farmers, seem evidently to justify the measure; from whom it was clearly to be understood, the population of the parish had not, in consequence of the enclosure, been diminished, and that he was now getting a comfortable living upon the lands, at the rent of half a guinea per acre, which in an uninclosed state, the former occupier starved upon half a crown per acre.

General Hall, of West Wrating, to whom I feel much indebted, for his polite attention, confirmed in the opinion I had formed of this improvement; he observed, that although the estates, in consequence of enclosure, had been considerably augmented in their value, the parish was nevertheless, at this time, in a very happy state of progressive improvement, and cannot fail in a few years, to be much more productive, not only to the owners and occupiers, but to the publick at large.

SNAILWE

*SNAILWELL.*

**T**HE arable land in this parish, lies in three open fields, south by east of the village, and towards the turnpike road, leading from Thetford to Newmarket; the soil is of two distinct sorts, that of the first quality, a loamy, or tender clay, of a good staple, lying upon a chalk, proper for the culture of wheat, barley, oats, rye, peas, clover, trefoil, and turnips, and contains about seven hundred acres; the remainder, is of a light, sandy nature, well stapled and proper for the broad cast turnip husbandry, and comprises about three hundred acres, which taken with the lands of the former, or first quality, are rented at nine shillings per acre.

There are besides in this parish, about six hundred acres of sheep-walk, valued at three shillings per acre, and about eighty acres of moor or fen common, valued at seven shillings and six-pence per acre. The enclosures in severality, contain about one hundred and forty acres, and are rented at twenty-one shillings the acre. There are about twelve hundred sheep of the Norfolk breed, which are kept healthy, by preventing them, from feeding upon the wet, moory, fen common; this would be drained, and improved to a very great advantage, were not the water penned back upon it, by a staunch, forming a fish pond, at Fordham Abbey.

The annual rent of the largest farm in this parish, is three hundred and forty pounds. One tenth part of the first cost, of all the foreign manures used in the parish, amounts to about thirty pounds per ann. and is allowed by the worthy

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minister

minister to the farmers. Two crops and a fallow, is the common mode of husbandry, the produce from which, is

Wheat	22 bushels per acre
Barley	22 ditto
Oats	20 ditto
Rye	20 ditto
Peas	16 ditto

The laying the intermixed lands together in the open fields is looked up to, as a very desirable improvement; but it should be left to the option of the owners, or occupiers, to enclose, or not. There are in this parish, twenty-one houses, thirty-two families, and, by computation, one hundred and sixty persons. The poor's rates are one shilling and eleven-pence in the pound, and the tythes are taken in kind.

### *LANDWADE.*

NO information could be obtained here. Some coarse pastures, and a deep, rich, white, loamy soil, was observed. The hedge rows, and natural herbage, indicate a good strong soil.

### *FORDHAM.*

THE soil of the open arable field, next Chippenham and adjoining to Snailwell fen, is of a thin, gravelly nature, lying upon a gravel; thence towards Brackland fen a white, thinly stapled, dry soil, upon a firm chalk, or clunch; and thence binding upon Brackland fen, a strong great

greasy, white, deep, soil, upon a clunch. On the east of the fen, a wet, heavy, cling clay, upon a deep, rich, blue gault, which burns into an excellent white brick, of the value of twenty-seven shillings the thousand, when delivered at the kiln.

On the south of the fen, the country rises into a deep, black sand; thence extending southwardly, the soil gradually changes to a lighter colour, upon a gravel; thence the staple improves in strength and quality, forming a compact, deep, white, earth, upon a clunch; ascending the hill, the soil becomes lighter, but continuing on the level, towards Isleham, the soil is the same. West of this field, is a common, of a moory nature, of about three hundred acres, lying upon a clay, and gravel, and depastured without stint; this tract of land, drains through Isleham, but is at present in a very bad state, owing to the neglect of the outward leading; and inward partition drains. On the west of this common, is a wet, brown, sandy, soil, which lies well for draining, but in consequence of the intermixture of property, is much neglected: ascending the hill, the soil becomes more dry, and thence, on the east side of Soame Road, it improves in strength, and is of a darker colour. South of this, and binding thereon, is another common, of nearly equal contents with the former; the soil, a moor, lying upon a clay, and well situated for being drained, into the Ely river, but at present, all attempts, for so important an improvement, are much neglected. South of the village, are about two hundred acres, composed of a deep, white loam, lying upon a chalk and clay; these extend to Landwade Hedge; thence, south-east, a dry, poorer, and mixed soil, bounded on the east, by a fen or moor, containing about one hundred acres, which through neglect of draining, are at this time, in a very bad state of cultivation.

The whole of the arable land, before described, in the parish, is suited to the cultivation of a great variety of crops which in the event of an enclosure, that is generally as much desired, would be attended to with great advantage. The enclosures in severalty, in, and near the village, partake of nearly the same variety of soil, as the arable; and contain about five hundred acres, which are rented at eight shillings per acre. The whole of this parish, contains two thousand, five hundred acres, and taken together, average nine shillings the acre.

The largest farm is rented at two hundred and fifty pounds per ann. the general produce through the parish, from the usual mode of husbandry, of two crops and a fallow, is

Wheat	18 bushels per acre
Barley	20 ditto
Oats	20 ditto
Rye	18 ditto
Peas	16 ditto

There are eighteen hundred of the Norfolk breed of sheep, amongst which, great losses are often sustained, in consequence of their feeding upon the rotten, boggy sheep walks, which, however might be much improved, if not totally avoided, by a better drainage of the low land. This parish, contains about seven hundred souls, and the poor's rates amount to three shillings in the pound.

KENNET

*KENNET.*

**T**HE soil here, in general, is of a light, gravelly, and dry, chalky nature, under which, in many places, is found, a very fair marl, which has been applied in the proportion, of about three thousand bushels per acre, with very good effect upon the gravelly soils, at the expence of about twenty shillings the acre, for filling and spreading, besides that of the carriage, which is in proportion to the distance it is taken from the pit.

The arable land, in general, lies in open field, amounting to about one thousand acres, and is rented at six shillings the acre. The pastures in severalty, contain about thirty acres, and are valued at one pound per acre: the meadows, which are in severalty also, are valued at ten shillings per acre, and amount to about twenty acres. The commons contain about sixty acres, and are valued at seven shillings the acre; and the heath land, which is used as a sheep-walk, contains about three hundred and fifty acres, and is valued at two shillings the acre.

The largest farm is about two hundred pounds per annu and with the rest of the parish, is occupied at will. A considerable part of it, would, no doubt, be highly improved by the marl abovementioned, were not the lands so much intermixed in the open field—the experiment has been successfully made in the enclosures. At present, great exertions are made, at the expence of thirty-five shillings per acre, in procuring light composts. The husbandry in the open fields, two crops and a fallow: the produce per acre, withheld.



held. About six hundred ewes of the Norfolk breed are kept in this parish, which are extremely liable to rot or slip, their lambs. They are very subject to the garg red-water; the symptoms of which are so indiscernable in two hours after the animal has appeared in perfect health it is found dead. The Welch and Suffolk breeds of sheep are preferred; but these breeds, as also of the sheep, may be much improved, by a previous introduction of new grasses, and otherwise improving the herbage. This parish contains fifteen houses, eighteen families, and ninety poor. The tythes are commuted for, and there is an estate belonging to the dean and chapter of Ely.

### CHIPPENHAM.

THE soil of this parish may be described under three distinct heads:—The first quality, a deep white loam upon a chalk; the second, a mixed soil, of a dry, and thin staple, upon a chalk and gravel; and the third, driving sand, under which, in many places, is found tender chalk, which has been recently tried as a manure. There are about nine hundred acres comprised under the first quality, which are rented at fourteen shillings the acre, and are proper for the culture of wheat, oats, rye, peas, and the annual trial for turnips. Under the second quality about nine hundred acres, rented at twelve shillings the acre, proper for the culture of cinquefoil, and the broad turnip husbandry. Of the third quality, there are about five hundred acres; rented at eight shillings the acre, and proper for the turnip husbandry. The pasture grounds

the park) containing about sixty acres, and rented at twelve shillings the acre, are in a very rough and unimproved state.

There are about two hundred acres of fen-land, which ought to be drained through Fordham; but from the obstructions, by mill-dams, &c. in those water-courses, are at present drowned, and in a very deplorable state; they produce little else than sedge, which is cut for thatch, litter, or fuel.

This parish was enclosed about four years ago; is tythe-free, and under leases of twenty-one years, with restraining covenants as to cropping. The population not ascertained, but the poor's rates are ten-pence in the pound.

The largest farm at this time in the parish, is rented at two hundred and sixty pounds per ann. The course of husbandry; first year fallow, with dung, sheep-folding, and light-hand, or top-dressings for turnips; second year, barley, or oats, with clean clover, sixteen pounds to the acre, where the soil is proper for it; where it is of an inferior quality, the land is laid down with rye-grass, trefoil, and Dutch clover, in proper proportions; third year, clover stubble, sown, or set with wheat. The lighter lands, after lying two years under rye-grass, trefoil, and Dutch clover, are winter fallowed for tartarian oats, or summer tares.

Produce per acre of Wheat	24 bushels
Barley	30 ditto
Oats	36 ditto
Tartarian ditto	30 ditto per acre.

Some attention is here paid to the forming of dunghills, and the farmers, very judiciously, prefer the strongest, and most.

most greasy clay, to form the bottoms of such, as are to be spread upon the lighter soils.

The Norfolk sheep are preferred; about one thousand which are distributed upon the several farms, and are to the disease, and accidents, mentioned in the last both of which are attributed to the superior quality of their food: the sudden changing of as from turnips to hay, in many instances, has had a very good effect. The common breed of cows, preferred at present, though they are very subject to the but not frequently to slip their calves.

The hamlet of Badlingham, is an appendage parish, and consists of one farm only, the arable which, amounts to about nine hundred acres; the soil with the several descriptions, given in the survey of Chippenham; besides which, there are about one hundred acres of meadow and pasture land, of a moory nature, affording turf for fuel, but owing to the present want of drainage which may be referred to the same causes, which operate at Chippenham, these lands are no better, than the fen land belonging to that parish.

The common open field husbandry, is practised on this farm, although it lies compactly together in different pieces, and is tythe free. No manure is made use of but the common farm yard, and stable dung; the average produce of which, per acre, is

Wheat	18 bushels
Barley	20 ditto
Rye	16 ditto
Oats	18 ditto
Peas	16 ditto.

A flock of four hundred sheep is kept on this farm, extremely subject to the disease first noticed at Ashley, the red water, garget, or gangreen, between the flesh and skin of the animal—warping their lambs, and dying *dunt*, (as the shepherds term it) that is, dizzy; as a cure for this latter calamity, the shepherd will frequently open the sheep's head, at the insertion of the horns into the skull, with his knife, and extract one, two, and sometimes more maggots, larger than those commonly generated in tallow. This hamlet contains forty souls, and is assessed to the poor's rates with Chippenham.

### ISLEHAM.

THE arable land here, lies in four distinct, open, common fields. On the south side of the village, it may in general be denominated, a whitish, tender clay, or loam, of a fair staple, lying upon a chalk or clunch; it is proper for the culture of wheat, barley, oats, rye, peas, clover, and turnips; contains, about eight hundred and fifty acres, and is rented at fifteen shillings per acre. The pastures in severalty, immediately joining the village, on the north side, contain about two hundred acres, and are rented at twenty shillings the acre. The land skirting upon the fens, consists of about three hundred acres; is rented at eight shillings and six-pence per acre. The fen, amounting to fifteen hundred acres, has been greatly injured by the practice of cutting turf, and from the deplorable state of its drainage, but a small portion of it is under cultivation: including the draining tax of eighteen-pence per acre, it does not average at this time, more than four shillings and six-pence per

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acre.

acre. There is a small poor's common, of about fifty acres subject to half a draining tax, or nine-pence per acre.

The whole of this parish, is occupied at will, and the largest farm, two hundred and fifty pounds per ann. In addition to the common farm yard, and stable dung, the following manures are resorted to: foot, fetched twenty miles first cost, eight-pence per bushel, twenty bushels per acre. Pigeon-dung, twenty bushels per acre, at the like first cost and procured from any distance within thirty miles. A small fish, caught in great numbers, called stickle backs, are purchased at seven-pence half-penny per bushel, in the village, are made use of at the rate of twenty bushel per acre. Rabbits down, and the trimmings of their skins consisting of their legs, ears, scalps, &c. purchased of the furriers, at four-pence half-penny per bushel, and fetched from Norwich, are applied at the rate of thirty bushels per acre. First year, fallow, dung, sheep-folding, and light manures; for the second year wheat; winter fallow, wheat stubble, a light hand dressing in the spring; for the third year, crop of barley; barley stubble sown the fourth year with peas, oats and lentils—produce of these, on the usual average

Wheat	24 bushels the acre
Barley	32 ditto
Peas, Oats and Lentils	} 24 ditto

The harvest here, begins about the twenty-fifth of July which in general is ten days earlier, than at Soame, owing to the warm nature of the soil, which is kept constantly full of natural or artificial manure. About eight hundred of the Norfolk breed of sheep, are kept in this parish, which  
answe

answer very well, and as they are carefully prevented from depasturing upon the fens, and low grounds, are preserved in good health, sound, and free from the rot, and subject only in a small degree, to the diseases of the neighbouring villages. Crossing the breed with the Craven bull, has much improved the beauty of the calves, which are generally suckled for the London markets. There are about two hundred families, and by computation, one thousand inhabitants: the poor's rates are about two shillings and six-pence in the pound.

The unevenness in the beds of the rivers Lark and Cam, are much complained of, in resisting the descent of the water. At Prick Willow, six miles below, the water has been found to be no more than eighteen inches deep, when it has been four feet deep, and full between the banks running through this parish. The working of the bear, has been of much service, but the gravels and hards, forming the obstructions in the beds of these rivers, are only to be removed by hand, which done, the drainage of the fen land in this parish, would be greatly improved.

### *BURWELL.*

**O**N the west, and south-west of the village, and adjoining thereto, is a deep, rich, white loam, lying upon a chalk, proper for the culture of wheat, barley, oats, peas, and clover; thence extending southwardly, the staple becomes more shallow, and ends in a thin, gravelly soil, upon a gravel, and proper for the broad cast-turnip husbandry. On the north of the village, a dark coloured, strong, brown

mould, of an excellent staple, upon a clunch, and proper for the culture of wheat, barley, beans, and clover. The whole contains about two thousand acres, which, with about two hundred acres of enclosed pastures in severalty, are rented at seven shillings and six-pence per acre.

The fen contains about two thousand acres, a considerable part of which has been greatly injured by the digging of turfs; it is constantly inundated, and valued at one shilling per acre. In this most deplorable situation it is considered by the principal farmers, to be far more productive, than if it were better drained, because the water encourages the growth of reeds and sedge, which is cut by the poor people, and sent down the water to the upper country, for the purpose of drying manure. Any attempt in contemplation for the better drainage of the fen, is considered as hostile to the true interests of these excluded people. The system of husbandry in the highland part of the parish, is two crops and a fallow; the produce per acre on an average of five years is

Wheat	22 bushels
Barley	20 ditto
Rye	18 ditto
Peas	14 ditto
Oats	20 ditto

Common farm yard and stable dung, with a little oil cake dust, are the only manures in use. This parish is famous for producing fine seed wheat, which is procured by a slight threshing, when the top of the crop only, the prime and best of the grain, comes out. This is carried early to market and sells from a shilling to fifteen-pence per bushel, higher than the current seed grain, of the day. The straw is threshed over again in the course of the winter, and by tailing it close, makes a fair merchantable sample.

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There are about seventeen hundred sheep, chiefly of the Norfolk breed, kept in this parish, and are tolerably healthy. It contains about one hundred houses, two hundred families, and by computation one thousand persons. The poor's rates are two shillings and nine-pence in the pound.

The enclosure of this parish would, it is here thought, be very desirable; and until such an event takes place, no improvement can be made in the herbage, nor of course in the breed of cattle.

### *SWAFFHAMS:*

**N**O information obtained in either of these parishes, though the soil, and circumstances attending them, may probably be pretty well understood, by reference to Burwell, and the parish of

### *BOTTISHAM,*

where the soil is various; on the east of the village, a white, tender clay, or loam, of a fair staple, and proper for the culture of wheat, peas, clover and barley; thence eastwardly, and towards the heath, the staple becomes more thin, and is lost in a dry chalk, and reddish coloured gravel, proper in part for the culture of cinquefoil, and the broad cast turnip husbandry. On the north, a gravelly soil, of a middling staple, upon a gravel and sand, and applicable to the culture of wheat, barley, turnips, trefoil, rye, and peas. On the south, a moist, gravelly soil, lying near the springs, upon a chalky marl, proper for the culture of wheat, barley,



barley, oats, clover, and the two furrow Scotch turnip husbandry. The whole contains about sixteen hundred acres, and is rented at nine shillings and six-pence per acre.

The improved pastures in severalty, bear a very small proportion to those, which remain in an unimproved state. The former are worth twenty shillings, whilst the rent of the latter, is about twelve shillings per acre; they skirt upon the fen, which at present is in a deplorable situation, and subject to frequent inundations, by the overflowings of the High waters, and the river Cam, whose banks are most shamefully neglected, and are as much too low, as the bed of the river is too high.

The largest farm in this parish, is held under a lease for eighteen years, at the rent of three hundred and fifty pounds per ann. The open field husbandry, with the corn, the farm yard, and stable dung manure, forms the established practice of this village. Lentils mixed with oats or barley are generally sown in the neighbourhood, as rack-meat for horses; they should always be mown when the oats or barley are in full ear, and when well saved, are an inviting food, though of a hot, and feverish nature; the proportion sown are two bushels of lentils, mixed with one bushel of oats or barley.

Produce per acre	Wheat	20 bushels
	Rye	22 ditto
	Oats	18 ditto
	Peas	18 ditto

There are about eighteen hundred of the Norfolk breed of sheep, kept sound in this parish, by carefully attending to the spots, on which they depasture. The farmers

are of opinion, that no new breeds of stock, would answer better, than those they now have, even if the parish were to be enclosed, an alteration, which is neither wished for nor proposed. This parish contains about one hundred and six houses, and, by computation, six hundred persons, arising from one hundred and twenty families; and the poor's rates are four shillings in the pound.

The house of industry in this parish, appears to be of but little use; probably arising from the want of proper management.

### *WILBRAHAM—Magna.*

*[The farmers being all absent when I called at this Wilbraham, the reverend Mr. Hicks obligingly favoured me by letter with this account.]*

**H**ERE the soil varies considerably; the arable is all of a light nature; has one general substratum of chalk, and is rented at eight shillings per acre; the improved enclosures in severalty at twenty shillings per acre. There are about three hundred acres of common; which is depastured by cows, and a large tract of heath, which is appropriated to a sheep-walk, where the Norfolk breed is preferred. The cow cattle very indifferent, small, and ill shaped; seldom yielding more, when fed upon the common, and in full milk, than three quarts at a meal. The low and fenny grounds in this parish are of considerable extent, but labour under the same disadvantages and difficulties, with those noticed in the parish of Bottisham, and with those, are incapable of being drained by the present means adopted for that purpose. A considerable objection arises to the enclosing of this parish, from the supposed

posed impracticability of raising live fences upon the dry land, towards the heath; the intermixed proper however, greatly desired to be laid together, and right of sheep-walk suppressed. Cinquefoil might be cultivated to advantage on the thinnest land; and were low and fenny grounds, drained and brought into a profitable state of improvement, the then rich pasture, and thin soil, would mutually come in aid of each other. The here are all held at will: the rent of one only, exceeds hundred pounds per ann. The common practice of husbandry is two crops and a fallow, assisted occasionally with composts. The produce per acre of

Wheat is 16 bushels

Barley 18 ditto

Rye 18 ditto

There are sixty distinct families, and by computation hundred souls. The poor's rates amount to three shillings in the pound.

#### *WILBRAHAM—Parva.*

ON the north and east, and to the westward of the village the arable land is of a red, sandy, nature, lying upon gravel, and proper for the Norfolk turnip husbandry. To the south-east, a whitish, tender clay, or loam, of a staple, upon a chalk, and proper for the culture of wheat, barley, peas, oats, and clover; on the south, and westward a deep brown mould, upon a gravel, applicable to the culture of wheat, barley, oats, rye, clover, peas, and turnips. The whole contains \_\_\_\_\_ acres, and is rented at ten shillings per acre.

The improved pastures in severalty, contain about seventy acres, and are rented at twenty shillings per acre. The greater part of the common, which comprises about five hundred acres, produces little else, than sedge, and rushes, which are mown for litter. It has been proposed to effect the drainage of this common, by means of a tunnel, placed under the bed of Quy water, but which was objected to by the inhabitants of Taversham. This tract of land, would be easily improved to the value of fifteen shillings per acre, could the command of the water be procured, but in its present state, it must continue to labor, under the like general calamity of the fens in this neighbourhood. There are besides in this parish, about one hundred and forty acres of heath sheep-walk, well skinned or turfed over, which are valued at five shillings per acre.

The largest farm is rented at one hundred and thirty pounds per ann. The common open field husbandry, with little attention to the procuring an encrease of manure, produces per acre

Wheat	18 bushels
Barley	20 ditto
Rye	16 ditto
Peas	16 ditto
Oats	20 ditto
Tares	14 ditto

The stock in general is equal in quality to the herbage of the parish, which, however, might be much improved by previously draining the low lands, and enclosing the high lands ; both of which are most ardently desired. There are thirty houses, thirty five families, and by computation, one hundred and seventy-five souls : where the poor's rates are three shillings and sixpence in the pound.

*STOW cum QUX.*

ON the south of the village, is a tender, easy work loam, of a good staple, lying upon a gravel, proper for culture of wheat, barley, rye, turnips, trefoil, and pe on the north, intermixed, in about equal quantities strong cold clay, a light loam, and a fen, or rather a rafs. The first is applicable to the culture of wheat, be black-oats and clover; the second to those crops mentio as proper for the south side; and was the morafs v drained, and put under a good system of fen husbandry would be rendered very valuable.

The miserable condition of the low grounds, in neighbourhood, is chiefly to be ascribed to the neglect the conservators, in not scouring out the leading drains the Cam, and keeping the banks of that river, and Bo ham lode, in repair; were these works properly atten to, a considerable relief would be obtained, to all the grounds in this parish, and the neighbourhood. Some low draining has been done, and has hitherto answered tremely well. The lands skirting upon the fen, are a coloured close clay, upon which the under drains, v laid off, one pole apart, eighteen inches deep, and an and a half wide at the bottom; part of these drains v filled with stones, the whole cost of which was four-p per rod; the other part filled with a straw rope, the w cost of which, one penny three farthings per rod. At time, they both draw and work equally well: the l thus hollow drained, are now richly worth a guinea, wh previous to this improvement, were not worth eight

lings the acre. Much more of this under draining would be performed, were it not for the wretched state of the general drainage of the low lands, which absolutely forbids further attempts.

The arable land above described, lies in three open common fields, and amounts to about one thousand acres ; which are rented at half a guinea per acre. Two crops and a fallow, assisted occasionally with pigeons dung, and oil cake dust, is the common course of husbandry ; from which a produce of

Wheat 18 bushels

Barley 20 ditto

Rye 22 ditto

Oats 22 ditto

Peas 14 ditto per acre is obtained.

The largest farm, is about two hundred pounds per ann. under a lease of twenty-one years. There are thirty-six houses, thirty-nine families, and exactly two hundred and ten inhabitants. The poor's rates are three shillings in the pound.

### *HORNINGSEY.*

THE soil here in the open fields is very much intermixed, being a thin gravel, and a loam, or tender clay, of a good staple ; taken together, the land may be properly employed in the culture of wheat, barley, oats, rye, peas, clover, trefoil, and turnips ; and including the arable land of Clay-hithe, which amounts to five hundred acres, is rented at twelve shillings and six-pence per acre. The

prime of the enclosed pastures, containing about two hundred acres, are richly worth a guinea per acre ; those of the second quality, skirting upon the fen ; include about one hundred acres, and are rented at twelve shillings per acre : exclusive of these, there are about one hundred and fifty acres of common, appropriated to the poor of Homingsey, Quy, and Ditton, which have been much injured, by the digging of turf, and owes its present deplorable condition, as do the other low lands, to the height of the bed of the river Cam, and the shameful neglect of the banks of the inside water courses, in common with the adjoining parishes.

Some hollow draining has been lately done, in the wet parts of the open fields, between the lands ; made eighteen inches deep below the bottom of the furrow, and two inches wide at the bottom ; they are filled with bushes and sedge, and seem to answer extremely well : the labour and materials for this work, cost two-pence half-penny per rod.

The largest farm in this parish, is two hundred pounds per ann. and held under a lease of twenty-one years. Two crops and a fallow, is the common mode of husbandry : no manure but the farm yard and stable dung, is here in use : the general produce per acre,

Wheat	18 bushels
Rye	24 ditto
Barley	22 ditto
Peas	20 ditto
Oats	22 ditto

A remarkably fine growth of volunteer ash, has lately been cut down ; elm likewise flourishes ; but there are not any oaks, either planted, or spontaneous. No enclosing,

nor even laying together the intermixed property in the open fields, is desired.

There are thirty-eight houses, forty-five families; by computation, two hundred and twenty-five souls, and the poor's rates are two shillings in the pound.

### FENNY-DITTON.

THE soil here in the open fields, may be described, as white, strong, loam, or clay, of a good staple, lying upon a chalk quarry, or clunch, and is proper for the culture of wheat, barley, oats, peas, beans, and clover; and a strong, gravelly, mould, of a good substance, upon a reddish coloured clay, or brick-earth, applicable to the culture of wheat, barley, peas, rye, clover, trefoil, and the two-furrow turnip work: The whole contains about five hundred acres, and is rented at twelve shillings and six-pence per acre.

There are about two hundred and fifty acres of enclosed arable, and pasture land, in severalty, which are rented at twenty-five shillings the acre, a kindly soil for the cultivation of ash, and elm; a few oaks, scattered about, appear likewise in a thriving state. The remainder of the enclosures, amounting to about one hundred acres, being subject to occasional inundations, from the river Cam, are not valued at more than eighteen shillings per acre. Formerly about two hundred acres of fen common were enclosed, but the very bad state of the general drainage since, has defeated the good effects, expected from this measure; the soil of these enclosed lands, is an absolute *sea-silt*, mixed with small *marine shells*.



*feels*, and vegetable matter, or turf-moor: within this closure, a considerable improvement has lately been made, laying on, about fifteen hundred bushels per acre, of white, chalky, clay, from the highland.

The largest farm in this parish, is occupied under a lease for twenty-one years, at the rent of three hundred and one pounds per ann. Common open field husbandry, farm and stable dung, mixed with mould, together with about fifteen hundred bushels per acre of pigeon dung, are the manures in general use; the produce per acre withheld.

It has been frequently remarked, that the application of raw stable dung, before it is completely rotten, has produced in this neighbourhood, the disease in wheat, called the *wheat-blight*. There are sixty-eight houses, seventy-five families, and by computation, three hundred and seventy-five persons in the parish; the poor's rates are two shillings in the pound.

### TAVERSHAM.

**T**HAT part of the arable land, adjoining the village, is a tough, wet, clay, lying upon a gault, and which, when made dry, by properly hollow draining, may be well employed in the culture of wheat, clean beans, black oats, and clover; beyond this, and extending westwardly, is found a strong, brown, mould, lying upon a reddish coloured, earth, proper for the culture of wheat, barley, oats, and clover; thence south-westwardly, a white, chalky, and north westwardly, a sandy loam, proper for the culture of barley, rye, oats, peas, trefoil, and turnips. The who

tains about six hundred acres, and is rented at ten shillings per acre.

The pastures in severalty, which lie in and near the village, contain about sixty acres, and are rented at twenty shillings per acre. There are about one hundred acres of common, which at present, are of little value, but which might be greatly improved, by opening a large drain at the lower end, and drawing off, the waters of the common, into Quy water course.

The largest farm in this parish, is held under a lease of twenty-one years, and is rented at one hundred and fifty pounds per ann. The mode of husbandry, is two crops and a fallow, and the manures in use, are the common farm yard and stable dung, with sheep folding.

The general produce from Wheat is 18 bushels

Rye	18 ditto
Barley	18 ditto
Peas	18 ditto
Oats	22 ditto per acre.

The idea of enclosing, is not at all relished in this parish, the inhabitants being averse to innovation, and for the most part well satisfied with the present management. There are twenty-two houses, twenty-five families, and by computation, one hundred and twenty-five souls; and the poor's rates are four shillings in the pound.

**FULBURN.**

## FULBURN.

*[Having called several times at this village without effect, at length favoured with this account by letter, from R. G. Townly, Esq.]*

THE soil in general is of a thin, light, chalky gravelly nature; some part of which is a strong, deep and is good wheat land, containing  
The enclosures in severalty, containing acres, are rented at per acre.  
timber, hedgerows, and nutuzal herbage, seem to indicate a warm, and kindly soil.) A few of these enclosures are capable of being overflowed, which in a dry season, has been found to answer very well.

A common of about four hundred acres is appropriated to the feeding of cows, from April to the 26th day of November, from which time, to the ensuing 13th day of February, it is allotted to the feeding of sheep. The part of this common, towards Wilbraham, is of a light and sandy nature, with sufficient substance to pay well for enclosing; this improvement has not yet been proposed, although there can be little doubt of its beneficial consequences, particularly as the open fields lie in general in pieces of three roods, half acres, roods and half roods, three quarters of a rood; the expence, and great inconvenience of which, is inconceivable: temporary exchange is frequently made amongst the occupiers, but as these agreements are of necessity loose, and uncertain, little advantage arises from them; and as much of the land is in moi-

no permanent exchanges can be made without the authority of parliament.

The largest farm in this parish, is rented at one hundred and sixty pounds per ann. which, with all the others, is held at will. Common open field husbandry, with natural and artificial composts, produce per acre

The cow cattle are small, but equal to the present herbage of the parish; in which are kept about two thousand eight hundred sheep, amongst which I was not able to learn that any particular disease prevails. There are one hundred and sixty-six houses, and distinct families, amounting to six hundred and forty souls, and the poor's rates

### *CHERRYHINTON.*

**N**O information, after three times calling upon the principal farmers, could be obtained here: the face of the country appears to differ but very little from the general description of Fulburn, and that of

### *BARNWELL.*

The soil of which, in the open common fields, may be described in general, a gravelly loam, of a fair staple, lying upon a gravel. Of this nature, there are about one thousand acres, rented at thirteen shillings per acre; the part of the open field, which lies next to Cherry-hinton Moor, and along Brick-kiln Furlong, is of a close clingy nature upon clay; this may be very well employed in

G

the

the culture of beans, wheat, clover, and barley ; the for  
in the culture of wheat, rye, barley, peas, oats, cl  
trefoil, and turnips.

The enclosed pastures in severalty, contain about 1  
acres, and are rented at twenty-five shillings per acre. C  
ham Common, containing                      acres, and lying  
a bed of rich marl, is now fed by sheep, cows, and he  
would pay extremely well for the expence of enclosing,  
ticularly as it is so situated, that it could be overflowe  
pleasure, by the paper-mill stream. The open fields  
would be highly improved should an enclosure take place  
any rate, it would be extremely advantageous to have  
property which is at present much intermixed, thrown  
ther ; and as the same kind of marl as is found under C  
ham Common, abounds from Barnwell Grove to Chelte  
here can be no doubt of the improvement which this p  
is highly capable of. There is a moor of considerable e  
lying between the highlands of Cherryton and Barnwe  
the north-east, and Trompington and Cambridge on  
south-west ; which at this time is greatly annoyed by  
stream which passes through the west end of Cherr  
This moor is evidently sacrificed to the constant heigh  
the water in this brook, by which it is reduced to the  
of an absolute morass, though capable of being highly  
proved. The rent of the largest farm in this parish is  
hundred per ann. occupied under a lease of twenty  
years. The common field practice of two crops and a fall  
assisted by a considerable quantity of dung, procured  
turn for straw used in Cambridge, with great quan  
of brick, and old house rubbish obtained from thence,  
duces

Wheat	22 bushels per acre
Barley	30 ditto
Rye	26 ditto
Oats	30 ditto

There are fifty-seven distinct families, and, by computation, two hundred and eighty-five inhabitants ; and the poor's rates are three shillings in the pound.

### TROMPINGTON.

**T**HIS parish is bounded on the west by the river Cam, adjoining which there are about one hundred acres of half yearly meadow land, of a black moory nature ; and though subject to frequent overflowings from the river, are rented at twenty shillings the acre. On the north of the village is an open arable common field ; about thirty-five acres of which, binding upon the bounds of Cambridge, consist of a black friable mould, of a deep staple, lying upon, and mixed with some gravel ; these are proper for the culture of rye, barley, peas, turnips, and trefoil. The middle of the field is a strong loamy, well stapled soil, containing about one hundred and fifty acres, proper for the culture of wheat, barley, oats, peas and beans mixed, and clover ; and that part of this field, adjoining the village, is a red gravelly soil, of a good depth, and proper for the culture of barley, rye, oats, peas, trefoil, and turnips.

On the east of the village, and extending to the moor, are two hundred and twenty acres, the soil of which is perfectly similar to the last mentioned ; beyond the moor, and thence towards Cherryhinton, are one hundred and eighty acres, of a strong, brown earth, of a good staple, lying upon a clay, and proper for the culture of wheat, barley, peas, beans, black oats and clover. South of the village, and adjoining thereto, are about one hundred acres, of a light gravelly nature, proper for the turnip husbandry ;

thence southwardly, the soil improves in its texture, forms a tender clay, or loam, of a good staple, upon chalk; thence skirting upon the river, the soil becomes more tough and clingy, and is found to lie upon a gravel. The three fields contain about twelve hundred acres, taken together, are rented at about eleven shillings the acre.

The enclosures in severalty, lying in, and adjoining the village, are of a hot, gravelly nature, containing about sixty acres, rented at twenty-five shillings the acre. The common, or moor, which amounts to about 100 acres, is of a fenny nature, from four to nine inches deep, lies upon a gravel, is divided into three parts; and lies in common with the three arable fields.

The largest farm is held at will, together with the rectory of the parish, and rented at two hundred and fifty pounds per annum. The common open field husbandry, with the use of yard, and stable dung; assailed with oil dust, malt and pigeons dung, and what can be procured from Cambridge, at an average expence in foreign manures, of thirty shillings per acre, produce

Wheat	24 bushels per acre
Barley	28 ditto
Rye	24 ditto
Peas (in general)	16 ditto
Oats	30 ditto

The common Cambridgeshire sheep are supposed to answer the best, though they have lately experienced a very grievous calamity. The number kept in this parish about nineteen hundred and fifty; nine hundred of which perished last year, by the rot, and at this time, though the prospect is much brightened, yet great apprehensions are entertained.

entertained for the safety of the remainder of the old stock, which are daily dying. No enclosure is at present in agitation, though the want of such an improvement, is much lamented by the most thinking farmers, who are extremely desirous, that at least, the intermixed property should be laid together. There are about eighty houses, one hundred families, and by computation, five hundred souls; and the poor's rates are four shillings in the pound.

### STAPLEFORD.

ON the east of the village, and adjoining thereto, the open field arable land, is a thinly stapled, red soil, lying upon a gravel, and proper for the culture of barley, rye, oats, peas, clover, trefoil, and turnips. North-west of the village, and immediately adjoining thereto, a deep, strong, good, wheat soil, upon a chalk; thence in the same direction, the strength and staple of the soil decreases, and ends in a thin dry chalk, or hurrock, proper for the culture of barley, rye, peas, oats, trefoil and cinquefoil. South-east of the village, the soil is similar to that described on the east, but stronger and better stapled, and may be well employed in the culture of wheat, barley, oats, rye, peas, clover, trefoil, and turnips. North and north-east, of the village, a thin, dry, chalky soil, similar to that on the north-west. The whole of which contains about nine hundred acres, and is rented at ten shillings the acre.

The enclosed pastures in severalty, which lie in, and near the village, amount to about one hundred acres, and are rented at twenty-two shillings and six-pence per acre. The half-yearly meadow land, amounting to about one hundred



hundred acres, and lying south-west of the village, is rented at seventeen shillings and six-pence per acre. There are about forty acres of common, depastured at pleasure, and without flint. North-east of the village, and towards Gogmagog Hills, are about five hundred acres of heath sheep walk, valued at half a crown per acre.

The largest farm is occupied under a lease of fifteen years, at the annual rent of two hundred and eighty pounds. The common husbandry and manure, assisted with a small quantity of oil dust and pigeons dung, produces per acre

20 bushels of	Wheat
22 ditto	Rye
24 ditto	Barley
26 ditto	Oats
16 ditto	Peas

There are about six hundred of a mixture of the Norfolk and Cambridgeshire sheep kept in this parish, subject to no particular disease. The enclosing of this parish, is not looked up to as a probable improvement, nor is such a measure at all wished for. There are forty-five houses, sixty families, and by computation, three hundred inhabitants; and the poor's rates are half a crown in the pound.

### *BABRAHAM.*

**T**HE enclosures in this parish, are a light, gentle, soil, of a tolerable staple, and lying chiefly upon a gravel. A mixture of the broad and narrow leaved plantain, a bent, or wire grafs, with a small portion of the perennial red and white

white clover, appear to be the natural herbage; about one hundred and sixty-five acres of this land is water-meadow, and are valued at twenty-six shillings the acre: the remainder of the enclosures are let at thirteen shillings per acre. The grafs or hay, produced from the water-meadows, is chiefly inferior to that (weight for weight) which grows voluntarily, and upon unwatered ground. The soil in the open fields is of a thin dry nature, lying upon a chalk, and gravel proper for the culture of barley, rye, peas, trefoil, cinquefoil, and turnips. There are about thirteen hundred and fifty acres in the open fields, which are rented at six shillings the acre; there are besides about two hundred and twenty acres of heath, sheep walk, valued at half a crown per acre. All this parish is occupied under leases for twenty-one years, and the largest farm is rented at about four hundred pounds per ann. The common husbandry obtains in the open fields, but in the enclosures the following management is observed:—Winter fallowing, dung, sheep-folding, and preparation for turnips; second year, barley with clover or trefoil; third year, wheat, or peas, drilled or sown broadcast, upon the clover or trefoil lay. This system is occasionally varied, for the introduction of the common, open field and winter fallow barley husbandry; the latter of which is a winter fallow, and manure for the first barley with seeds; second year, lay; third year, wheat drilled, dibbled or broad cast; fourth year, wheat stubble, winter fallowed, manured, and prepared for turnips: the produce per acre from this management

Wheat	24 bushels
Barley	36 ditto
Oats	36 ditto
Rye	24 ditto
Peas	20 ditto

About:

About one thousand sheep of the Norfolk breed are kept in this parish; the Gloucester brown, and the Suffolk poll, cows answer; but, they are however subject to a disease called the joint garget, the first symptom of which is a partial relaxation of the nerves and tendons; this soon becomes general, and the whole frame of the animal is so far deranged, as to render it, as incapable, as it seems indifferent, about seeking its food; when in motion the bones are heard to rattle; a fever and great costiveness prevail the whole time the animal lingers, which generally does not exceed two months, and then dies. This disease appears to be but little understood by the cow doctors. The laying of the intermixed land together, doing away the sheep-walks in this parish, and the right of shackage in the common fields, are improvements much desired. There are thirty-two houses, thirty-six families, and, by computation, one hundred and eighty souls. The poor's rates are seventeen-pence in the pound, exclusive of a donation of ninety-seven pounds per ann. appropriated to the use of the poor, under the restrictions of the donor. This parish is tythe-free.

### *LITTLE ABBINGDON.*

**T**HE soil on the east side of Bournbridge, in that which is called Hildersham Field, consists of a tough clay, upon a reddish coloured brick earth, proper for the culture of wheat, beans, black oats, and clover; this field contains about three hundred acres, and is valued at ten shillings per acre. Thence extending towards the heath, the staple is lost, in a thin dry chalk, and gravelly soil; of this there are about two hundred acres, valued at three shillings per acre.

The

The soil of the arable land, lying north-eastwardly of Bourn-bridge, is of a nature similar to the last described; this amounts to about five hundred acres, and being in better condition, from lying nearer to the dung-heap, is valued at five shillings per acre. The remainder, containing about five hundred acres, extending to the heath, and similar to that which adjoins the heath, before described, is rented at three shillings per acre.

There are about sixty acres of half yearly meadow land, which though subject to occasional overflows, is valued at twenty shillings the acre: after this meadow land has been flooded, great care is taken to prevent sheep from feeding upon it, as in that state of wetness, it has been frequently known to have produced the rot. The common field husbandry, with the manures, produced in the parish, and aided by malt-chives, pigeons dung, and oil cake dust, produce per acre

Wheat 16 bushels

Barley 20 ditto

Rye 20 ditto

Peas 20 ditto

Very great advantages would accrue to this parish, from an enclosure; the wet, heavy land, in Hildersham field, would be hollow drained, and highly improved; the dry, chalky soils, would be appropriated to the culture of cinquefoil, and other proper crops; the whole face of the country would assume a more fruitful appearance, and in fact, would soon become so: the arrangements for this improvement, are greatly desired; for by enclosing, or at any rate, laying the intermixed property, in severalty, and together, the convenience and value of the parish, must be greatly augmented.

The Norfolk breed of sheep, to the number of is preferred; the Gloucester brown, and Suffolk poll'd cows answer very well. Many of the cottages are very bad doubly and trebly tenanted: there are ninety persons in the parish; the poor's rates are two shillings in the pound, and the great tythes are taken in kind.

### HILDERSHAM.

THE soil in this parish, towards Great Abington, is of a light, gravelly nature, lying upon a gravel; but towards Balsham, is found upon a chalk; it is proper for the culture of cinquefoil, and the turnip husbandry. About one third of the arable, and that part, which lies towards Linton, is of a stiff, clayey nature, and proper for the culture of wheat, beans, black oats, and clover; towards Hildersham Wood the soil improves in its strength, and staple, and produces good wheat, and beans, to which might be added, black oats and clover; the whole contains about nine hundred acres, and is rented at nine shillings per acre. The enclosures in severalty, which lie in, and near the village, are binding upon Hildersham Wood, contain about one hundred and sixty acres, and are rented at fifteen shillings the acre. Common open field husbandry, without foreign manures.

Produce per acre	Wheat	16 bushels
	Barley	20 ditto.
	Rye and Beans	16 ditto.

An enclosure here, is much desired, but a difficulty much apprehended, in raising fences upon the dry, thin chalky land. There are in this parish, twenty-five houses  
thirty-two

thirty-two families, and one hundred and sixty persons, and the poor's rates, are three shillings and six-pence in the pound. There are five hundred and forty sheep of the Norfolk breed, preserved healthy, by the cultivation of a small quantity of rye, turnips, clover, trefoil, and rye grass.

### *LINTON & BARTLOW.*

**N**O information upon the survey obtained here; but the following was afterwards very obligingly communicated from — KEENE, Esq. the Rev. — FISHER, of Linton, and the Rev. — HALL, of Bartlow, by letter from the last mentioned Gentleman.

The soil in these parishes, consists of chalk, gravel, and clay. The rent of the open common fields, varies from three shillings and six-pence to ten shillings per acre; that of the half yearly meadow land, from fifteen shillings to twenty shillings; the enclosed pastures, from twenty to forty shillings, and the enclosed arable in severalty, from seven to twenty shillings per acre. The tenures of these farms, are from seven to twenty-one years, and the amount of their annual rents, from thirty to three hundred pounds. The rotation of crops, is, first fallow, dung, sheep-folding, malt-chives, and cinder dust; together with oilcake dust, at the rate of three guineas per acre, for the second years, wheat, or barley; third year, or after crop, oats or peas: the next year, where the land will admit of it, the oat stubble is winter fallowed, manured, and prepared for turnips, which is succeeded by barley. Tares, clover, cinquefoil, rye grass, and trefoil, are occasionally cultivated, and

found to answer. This management produces from twelve to twenty bushels of wheat per acre, and from twelve to twenty-four bushels of barley.

At Linton, there are about three hundred sheep of the Norfolk breed, free from the rot ; and it is doubtful if any other sort would so well suit this country. The cows not bred upon the soil, are frequently subject to a disorder, called the red water, more commonly in a dry, than in a wet summer : many remedies have been applied, with a great variety of success.

There are about three hundred acres of woods in these two parishes, the undergrowth of which is felled in ten or twelve years. Seed wheat, is sometimes sown in August, but the principal crop, not until the latter end of September. Barley and oats, in March or April. Harvest is in general began in the neighbourhood, about the tenth of August. There have been no enclosures made in these parishes, and so long as the property remains so widely, and variously dispersed in the common fields, no material improvement can be made in the stock and husbandry of this country. The malting trade, has much increased in these parishes of late years, and is now considerable ; but there is no other article of manufacture, or commerce, peculiar to this part of the country.

The number of distinct families in Linton, two hundred and fifty ; there are twelve hundred and fifty souls. The poor's rates, (*communibus annis*,) three shillings and six-pence in the pound. In Bartlow, including a hamlet in the county of Essex, there are forty-eight houses, sixty distinct families, and three hundred persons. The poor's rates here are  
three

three shillings ; but in the hamlet, which is always assessed separately, they are five shillings in the pound.

The price of labour, with the allowance of small beer, one shilling per day ; without it, fourteen-pence. When task work is performed, or the labourers work by the great, they will earn from seven to nine shillings per week. The hours of work, are from seven to five in the winter ; in the summer, from six to six, except in harvest, or when working by the great.

The price of all kinds of provisions has encreased within these last two years, and seems not likely to be reduced ; at present, that of mutton is five-pence, pork an halfpenny more, veal six-pence, cheese the same, and butter ten-pence the pound ; the price of flour is regulated by that of wheat.

### *SHUDY CAMPS.*

THE soil of the enclosed arable is a deep, strong, heavy brown loam, lying upon a blue and whitish coloured clay, proper for the culture of wheat, barley, beans, peas, clover, and black oats ; of which there are about three hundred acres, rented at sixteen shillings per acre : the soil of the enclosed pastures is very similar to that of the arable land, affording a rich tender herbage ; in these are included about seven hundred acres, rented at a guinea per acre ; besides which there are about six hundred acres of open field land, the soil of which is a stiff clay, and is gradually lost in a light, dry, thin, soil, upon a chalk and gravel ; rented at ten shillings per acre. In this field, all the intermediate crops may be cultivated between clean beans and rye, both inclusive.



elusive. The open field, as well as the enclosures, lie flat, no high back'd lands; they are all hollow drained, and in that respect managed in a very husbandlike manner. The largest farm is one hundred and thirty-five pounds per annum, which, with the rest of the parish, is held at will. The common practice of two crops and a fallow obtains, as well in the enclosures as in the open fields; produce per acre,

In the enclosures.		In the open field.	
22 bushels of	Wheat . .	18 bushels	
26 ditto . . .	Barley . .	20 ditto	
22 ditto . . .	Oats . .	18 ditto	
18 ditto . . .	Peas . .	16 ditto	
18 ditto . . .	Beans		

There are about four hundred and sixty sheep of the Norfolk breed, which are thought to answer very well; a cross between the Welch and Derbyshire cow is preferred.

There are forty-five houses, eighty families, and, by computation, four hundred and forty inhabitants; the tythes (except of two farms) are all taken in kind.

### CASTLE CAMPS.

THE enclosures in severalty, consist of a wet, but tender clay, lying upon a strong blue, and yellow clay, or loam; that part which has been properly hollow drained, and otherwise improved, produces a rich, fine, and luxuriant herbage, valued at thirty shillings per acre; the whole of a similar nature, and lies equally well for draining, and to admit the same improvement. The unimproved pastures, which are coarse, abounding with ants-hills, rushes, whins, and bushes

bushes, are valued at twelve shillings the acre. The open arable field, contains about three hundred acres; is of a nature, similar to that of Shudy Camps; and is rented at about nine shillings the acre.

The largest farm in this parish, is two hundred and fifty pounds per ann. Two crops, and a fallow, was formerly the common practice, but of late years, it has been found that one crop and a fallow answers best. The produce per acre of

Wheat is	22 bushels
Barley	20 ditto
Oats	20 ditto
Peas and Beans	14 ditto

There are about five hundred sheep of the Norfolk breed, kept in this parish, and the Derbyshire and Welsh cows, are most generally approved. It contains one hundred and seventy distinct families, two or three of which, are crowded into one house; there are by computation, eight hundred and fifty persons, and the poor's rates are four shillings in the pound. A striking instance of the ill effects of paring and burning land of a fair staple, is seen in this parish; the whole field is now ruined completely, and is reduced to the state of an absolute *caput mortuum*.

### HORSE-HEATH.

**N**O information.—The country from Shudy Camps, hither, and around this village, appears to contain, a great quantity of rich pasture land: the herbage on which, is now (being the fast day \*) putting forth, and is in most places, extremely good. Many of the farm houses, and offices, appear

\* 27th February, 1794.

appear in a very ruinous condition; the hall, in particular, a very elegant and modern building, is now levelling with the ground.

### *WEST-WICKHAM.*

NO information.—On ascending the hill, after passing the tan-yard, on the way from Horse-heath hither, the country opens, the soil becomes more light, and loamy, and seems well adapted to the culture of barley, and to turnip husbandry.

### *BALSHAM.*

THE open field arable land in this parish, is chiefly dry, thin, light soil, lying upon a chalk, and gravel, proper for the culture of barley, rye, oats, trefoil, cinquefoil, clover, and turnips, and containing about fifteen hundred acres, is rented at seven shillings and sixpence per acre. The enclosures in severalty, contain about one hundred acres, and are rented at a guinea: the meadow or half yearly land containing about fifty acres, is valued at ten shillings, and about twelve hundred acres of heath, sheep-walk, are valued at half a crown per acre.

The largest farm in this parish, is rented at three hundred pounds per ann. under a lease of twelve years, from the Charter house. The common field husbandry, without any assistance, from foreign, or artificial manures, produces

Wheat 18 bushels per acre  
Barley 18 ditto  
Oats 14 ditto  
Rye 14 ditto

There are about eighteen hundred sheep, of the Norfolk breed kept here, and which are supported very well, by their ranging over the heath, and the trefoil, clover, rye, and turnips that are sown for them in the common field. The Welsh, and Suffolk breed of cows, are much preferred. The laying of the intermixed property in the open fields together, and the suppressing the rights of sheep walks and shackage, is the only foundation upon which any improvement can be made, in the present stock and husbandry of this parish; in which are about one hundred families, and by computation, five hundred souls. The poor's rates are four shillings in the pound, and the tythes are all taken in kind.

### *SHELFORDS.*

NO information, upon twice calling, much promised.

### *SAWSTON.*

THE arable land lies in three open fields, northwardly of the village; the soil of which is of a good staple, but of a light and gentle nature, and lying generally upon a chalk and gravel: it is proper for the culture of turnips, barley, rye, oats, trefoil, and cinquefoil. These fields contain about twelve hundred acres, and are rented at eight shillings per acre. There are also about one hundred acres of half yearly meadow land, rented at fourteen shillings per acre; and three hundred acres of common, the soil of which is of a moory nature, and is much injured, from the pressure of water in the mill dams, which produces a very serious evil to the cows that depasture upon it; as many of them have lately been carried off by an absolute rot, which is communicated by the foulness of the herbage. This com-

mon has likewise produced the rot in sheep ; but they are now carefully kept from feeding there. All the low ground in this parish, are greatly inconvenienced from the same cause.

The largest farm here, is rented at two hundred pounds per ann. which, with the rest of the parish, under the common field husbandry of two crops and a fallow, assisted with foreign manures, at an expence of thirty shillings per acre, produces.

18 bushels of Wheat	
22 ditto	Barley
22 ditto	Oats
14 ditto	Peas per acre.

There are about four hundred and sixty sheep, which, with proper attention, are preserved in tolerable health. There are eighty houses, one hundred families, and by computation, five hundred inhabitants ; and the poor's rates are four shillings in the pound.

The laying of the intermixed property in this parish together, and in severalty, is greatly desired.

### PAMPISFORD.

THE arable land here, lies in three open fields, is of a light, thin, staple, upon a chalk and gravel, proper for the culture of barley, rye, oats, peas, cinquefoil, trefoil, and turnips ; containing about seven hundred acres, and rented at eight shillings per acre. The soil of the two enter commons, Hay, and Branditch Fields, is of a more gravelly nature, and more particularly adapted to the culture of turnips ; is valued and rented with the other open field land

The inclosures in severalty, contain about fifty acres, and are greatly reduced in their value, by the expence and difficulty of preserving fences : formerly these lands were rented at twenty shillings the acre ; at present their value is much decreased. The moor, or common, contains about one hundred and fifty acres, and is depastured by cows and horses in the summer, and sheep in winter, which here amount to four hundred. The common is capable of being completely drained, and highly improved, though at present, it is extremely obnoxious to the rot in cows, which frequently happens, as also to those hares which are supposed to feed upon it ; neither the stomachs, or intestines of either of these animals, have as yet been sufficiently inspected, to afford any conjecture as to the seat of the disease.

The meadow land contains about twenty acres, enter-common with Whittlesford, from the end of hay harvest until Lady Day, *with a bite on Easter Sunday* ; this bite formerly destroyed the whole crop of hay ; for although the Whittlesford cattle were only allowed from six o'clock in the morning of Easter Sunday, till the end of the morning church service, still the multitudes that were driven on to this common, during that time, either eat up, or destroyed every prospect of a crop of hay : at present, as Easter falls so much earlier, this custom is not so injurious.

The common field husbandry, assisted with occasional top-dressings, at an expence of thirty shillings per acre, produces

Wheat	18 bushels per acre
Barley	22 ditto
Oats	20 ditto
Peas	14 ditto

The largest farm in this parish, is two hundred pounds per ann. An enclosure is much desired, although great

apprehensions are entertained as to the practicability of raising and supporting live fences. The tythes in this parish, are all taken in kind. There are twenty-five families, one hundred and twenty-five souls, and the poor's rates, which a few years since were ample at six-pence in the pound, now amount to three shillings.

### *HINGSTON.*

**SOUTH** of the village, and adjoining the enclosures, the soil of the open field, is of a good depth, and substance, lying upon a gravelly clay; thence towards Saffron-Waldon, the soil gradually loses its staple, becomes dry, and hungry, and is found to lie very near the chalk and gravel. North of the village, and adjoining therto, the soil is of a very fair staple; thence extending northwardly, and towards Sawston, the soil becomes lighter, and rests upon a dry gravel. There are about fifteen hundred acres, of these descriptions, which are rented at seven shillings per acre; proper for the barley, and turnip husbandry. The enclosed pastures, contain about fifty acres, and are valued at eighteen shillings the acre; besides which, there are forty acres of meadow, or half yearly land, of a moory nature, binding upon the river Grant, valued at ten shillings the acre.

The largest farm in this parish, is rented at about two hundred and eighty pounds per ann. Four hundred and fifty sheep, of the common Cambridgeshire breed, (which in a certain degree, are subject to the rot, but not to such an alarming extent, as will be noticed in the further course of this survey,) are kept in this parish, where the common field husbandry,

husbandry, with an expence of forty shillings per acre, in foreign composts, produces

18 bushels of	Wheat per acre
26 ditto	Rye
36 ditto	Barley
12 ditto	Peas

An enclosure is much wished for. In this parish, there are thirty-six houses, forty-two families, and by computation, two hundred and ten souls; the tythes are taken in kind, and the poor's rates amount to two shillings and sixpence in the pound.

### ICKLETON.

THE arable land in this parish, lies in five distinct open common fields, the soil of which, adjoining the enclosures in severalty, consists of a reddish coloured earth, of a fair staple, lying upon a gravel, and proper for the culture of barley, peas, oats, rye, clover, and turnips: thence extending westwardly, and ascending the hill, a vein of cold, close, clayey land, rather flat, but capable of an high improvement, by under, or hollow draining: beyond this, in the same direction, the wet, heavy land, is gradually lost in a thin, dry, white soil, upon a chalk or hurrock; the clayey land might be advantageously employed in the culture of wheat, beans, black oats, and clover; the chalky land to what is mentioned in the first class, together with cinquefoil and trefoil. The whole of these fields, contain about two thousand acres, and taken together, are rented at seven shillings and sixpence per acre.

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The enclosures in severalty, containing about fifty acres are rented at twelve shillings; thirty acres of half year meadow land, valued at the same price; and a moory common, of about forty acres, valued at about four shillings per acre. There are about fourteen hundred sheep, of the Norfolk breed, kept healthy in this parish, where the large farm, is held under a lease for twenty-one years, at the annual rent of one hundred and seventy pounds. The common field husbandry, aided by an expence of thirty-eight shillings per acre, in artificial composts, produces

17 bushels of Wheat

22 ditto Barley

22 ditto Oats and Rye each per acre

There can be no improvement made in the stock of the parish, until the intermixed land, which now lies scattered through the open fields, is laid together. There are seventy-five houses, eighty-four distinct families, and by computation, four hundred and twenty souls; and the poor's rate are four shillings in the pound

### *FOULMIRE.*

THE field lying northwestwardly of the village, and towards Sheperheath, is a tender brown clay, of a good staple, upon a soft, wet, reddish coloured brick earth, except the part binding upon Foxton, which is of a thinner staple, and lies upon a gravel. Southward of this field the soil next the moor, is of a clayey nature, and well stapled; thence the staple decreases, and towards Heyden in Essex, it terminates in a thin, dry gravel: these several parts may be advantageously employed in the culture of  
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wheat, barley, oats, rye, peas, trefoil, clover, and turnips. They amount to about twelve hundred acres, and are rented at nine shillings the acre.

The enclosed pastures contain about sixty acres, and are rented at eighteen shillings; and about two hundred acres of heath sheep walk, valued at two shillings and sixpence per acre. Besides which, there is a common belonging to this parish, of a moory nature, containing about two hundred acres; but is at present of little value, owing to the bad state of its drainage. The common husbandry, with an occasional expence of thirty-five shillings per acre, laid out in foreign composts, produces

20 bushels of	Wheat
26 ditto	Barley.
26 ditto	Oats
16 ditto	Peas per acre.

About five hundred and fifty sheep of the common sort, kept tolerably healthy, by means of the artificial grasses. The largest farm is occupied at the annual rent of two hundred pounds.

Paring and burning upland, is here much approved. The spinning woollen, or worsted yarn, for the Norwich and north country markets, has a good effect, in giving employment to the women and children in this neighbourhood. In this parish are seventy houses, the like number of families, and by computation, three hundred and fifty souls, and the poor's rates are three shillings in the pound. The tythes of this, and the neighbouring parish of Triplow, are taken in kind, by a gentleman, who, much to his honor, allows the farmers one tenth part of the first cost, of all the artificial manure, or foreign composts, which they purchase. Very great advantages are expected, would result to the owners and occupiers of this parish, from an enclosure.

**TRIPLOW.**

*TRIPLow.*

**T**HE arable land in this parish, may come under of general description, that of a warm, gentle soil, of a staple, and proper for the broad cast turnip husbandry. The whole lies in three open common fields, which contain nineteen hundred and forty acres, and are rented at six shillings the acre. About thirty acres of the enclosed pasture lands, are rented at twenty-one shillings, and an equal number of acres in an unimproved state, are valued only ten shillings per acre. The common, lying east of the village and containing one hundred and forty acres, is a loose, spongy, black soil, abounding in springs, and is at present of little value, though capable of being much improved. The common husbandry, with an occasional expence, the amount of fifty shillings per acre, laid out in foreign compost, produces

Wheat	24 bushels per acre
Barley	24 ditto
Rye	24 ditto
Oats	24 ditto
Peas	16 ditto

Eleven hundred and sixty sheep, are kept in this parish, where the largest farm is occupied under a lease of twenty years, at one hundred and sixty pounds per ann. No improvement can be made in the breed of sheep, or of cattle; until the intermixed property is laid together, in the parish enclosed. There are fifty-eight houses, sixty-four families, and by computation, three hundred and twenty inhabitants, whose poor's rates, are three shillings in the pound.

*DUXFORD*

*DUXFORD.*

**T**HE soil adjoining the enclosures, on the S. W. side of the village, is a gravelly loam, well stapled, and proper for the turnip husbandry; continuing on this course, the strength and depth of the soil decreases, and terminates in a thin, dry, white soil, upon a chalk, or hurrock. Westwardly of this, the soil again improves in strength, and staple; and on the top of the hill, forms a strong, brown, wet earth, upon a clay, in which there is a mixture of some large stones and gravel; this again gradually fades away, till on the extreme western boundary of the field, it ends in a thin, white soil, upon a hurrock.

The soil of the middle field, agrees with the above description, except that it does not contain any wet, heavy land.

The soil of the moor field, adjoining north-westwardly, upon the enclosures, is of a deep, and kindly nature, beyond which, the staple fleetens, and is lost, in a hot, dry, burning gravel, which continues to the end of the field, and lies at the distance of, at least three miles from the village: the whole of these fields, contain about eighteen hundred acres, and are rented on an average, at six shillings and sixpence per acre. The enclosures in severalty, which lie in, and near the village, contain about fifty acres, and are not valued at more than twelve shillings and sixpence; about forty acres of half yearly meadow land, are rented at fifteen shillings, and the common, which is wholly fed by horses and cows, without stint, contains about forty acres,

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which

which would be richly worth, twenty shillings per acre, were it not so constantly in a state of inundation, from the Grant River, which reduces its present value, to five shillings the acre. The moor, which amounts to about twenty acres, has been much improved, by draining, of late years, yet it is still an unwholesome pasture for sheep, and cow cattle, and in its present state, esteemed of little value.

The largest farm in this parish, is occupied under a lease for twenty-one years, at the annual rent of one hundred and thirty pounds. The common field husbandry obtains, which, aided by an expence of forty shillings per acre, in foreign manures, produces

Wheat	18 bushels per acre
Barley	24 ditto
Rye	16 ditto
Oats	18 ditto
Peas	16 ditto

There are twelve hundred sheep, of the common breed kept in this parish; exclusive of the right of sheep-walk, two days in the week, possessed by Christal Farm, in the county of Essex. No improvement is possible to be made in the stock or husbandry, without previously laying the intermixed lands together, in the open fields, and suppressing the right of sheep-walk, and shackle; these are objects greatly desired by the most intelligent farmers, belonging to this parish; which contains sixty-two houses, eighty-seven families, and by computation, four hundred and thirty-five souls; the poor's rates are four shillings in the pound, and the tythes are commuted at half a crown per acre crop, and fallow.

**WEDFORD**

*WEDFORD, or WHITTLESFORD.*

**T**HE arable land, lies in three open common fields, the soil of which, is of a light, gravelly nature, well stapled, upon a gravel, and reddish coloured brick earth, and well adapted to the barley, and broad-cast turnip husbandry. The fields contain about one thousand acres, and are rented at eight shillings the acre. The enclosures in severalty, contain about seventy acres, and are rented at fifteen shillings, and there are about fifty acres of half yearly meadow land, rented at ten shillings per acre.

The largest farm in this parish, is occupied under a twenty-one years lease, at two hundred pounds per ann. which under the common practice of two crops, and a fallow, assisted with an occasional expence of thirty-six shillings per acre, in foreign composts, produces

Wheat	18 bushels per acre
Barley	24 ditto
Oats	20 ditto
Peas	16 ditto

There are about eight hundred and forty sheep, of the common breed, kept in this parish; amongst which, the red water greatly prevails, about the age of nine or ten months; the general remedy, is an immediate change of food, particularly from grass to turnips. The rot, has likewise been prevalent in this parish, but has not been so fatal as heretofore, owing to the quantity of artificial food provided by the flock master. Upon the thinnest land here, cinquefoil has been cultivated to great advantage; five bushels of seed is

sown per acre; it lies six years, and in that time, gets three hand-dressings of cinder ashes, at the rate of fifty bushels per acre, which cost upon the land, three-pence per bushel; this crop is annually mown, and taking the average of the six crops, produces twenty-five hundred weight of green hay per acre. The same practice obtains, with a similar result therefrom, in the neighbouring parish of Duxford. The laying of the intermixed land together, is thought might answer very well. There are fifty-five houses, seventy-five families, and by computation, three hundred and seventy-five souls. The poor's rates are four shillings in the pound, and the tythes are taken in kind.

#### *NEWTON.*

NO information here, though much promised.

#### *HAWKSTON.*

NO information here, after twice calling.

#### *HARLSTON.*

NO information here. The nature of the several soils in this and the preceding parishes, may be fairly ascertained by reference to Duxford and Whitlesford.

#### *FOXTON.*

NO information. The herbage in the enclosures here indicate a warm, and gentle soil, but the land appears to be greatly annoyed, by pollard trees, which give the appearance  
and

ance of an old dilapidated forest. Some of the buildings also, appear in a delapsd state. On the north side of the village, very good turnip land; on the south, a tender, well stapled white loam, lying upon a chalk; thence ascending the hill, the soil loses its strength, and staple, but descending towards Foulmire and Triplow, the staple encreases, and the chalky land is lost, in a brown, gravelly loam, lying upon a gravel. Cinquefoil is cultivated by Mr. Hurrell, whose sheep appear to be of a superior quality, though of the Cambridgeshire breed. His lambs are early, very thriving, and some of them fat.

### *SHEPERHEATH.*

THE soil on the east of the village, and extending towards Triplow, and Foulmire, is a light earth, lying upon a chalk, and gravel; a small portion in this direction, and immediately adjoining the enclosures in severalty, is a deep, rich, black loam, upon a chalk. The whole of this field, is proper for the barley, and turnip husbandry, and containing about one hundred and eighty acres, is rented at seven shillings the acre. The land lying west of the village, consists of a tender, gravelly clay, of a good staple, upon a clay, mixed with gravel, is proper for the culture of wheat, barley, oats, clover, and turnips, upon two furrow work; and contains about one hundred and eighty acres, rented at nine shillings the acre. On the north of the village, and towards Foxton, the soil is of a gravelly nature, a small part of which, lies upon a clay. The field called home-lands, worked in this shift, and lying in a direction towards Melbourne, is a white tender clay, or loam, of a good staple, upon a chalk, .



chalk, and is excellent wheat land. These fields together contain about one hundred and eighty acres, and are rented on an average, at nine shillings the acre. The enclosures in severalty, are of a fair staple, upon a clay, and gravel containing about one hundred acres; and rented at twenty shillings the acre. The common field, which lies in a direction towards Foulmire mill, is of a dry gravel, and moory nature; it comprises about one hundred acres, and is depastured without stint, by cows, sheep and horses.

The largest farm is held at will, under the annual rent of two hundred and seventy pounds, and pursuing the common field husbandry, with an occasional expence of fifty shillings per acre, in artificial manure, produces

22 bushels of	Wheat per acre
26 ditto	Barley
22 ditto	Oats
14 ditto	Peas

The laying of the intermixed land together, is much desired, as an opportunity would thereby be had to hollow drain, a considerable part of it, which at this time, is greatly incommoded by water. A cross with the Derbyshire cow, is preferred. About three hundred of the common Cambridgehire sheep, are kept in this parish, which contains thirty-six houses, thirty-eight families, and by computation, one hundred and ninety souls, and the poor's rates are two shillings in the pound.

MELDRITH

**MELDRITH.**

**N**O information. But observed on the north of the village, and towards the hamlet of Walton, some very good turnip land; the soil about the village, and towards Melbourne, a strong black earth, producing a rich herbage; it lies rather flat, though the greater part of it, is dry, and appears to be tolerably well managed.

**MELBOURNE.**

**N**O information. This village is large, and the land about it, appears of a generous, kindly nature; adjoining the enclosures, on the south side, is a tender, well stapled, strong, white loam, lying upon a chalk; this falls off towards Foulmire, and ends in a cold, wet, hungry soil, binding upon the moor, and which seems greatly to require the helping hand of skill and industry.

**BASSINGBOURN,**

*Including the Hamlet of KNEESWORTH.*

**N**ORTH-WEST, west, and south-west of the village, is a strong, brown, clayey soil, of a good staple, and proper for the culture of wheat, barley, oats, beans and peas, and clover; north-east, east, and south-east of the village, is a brown, deep, loamy soil, lying upon a gravel, proper for the culture of wheat, barley, oats, rye, peas, beans, clover, and turnips. Thence in the same direction, beyond the line of  
 Robinhood's

Robinhood's Tree, and extending towards Royston, and Litlington, a thin, dry, white soil, upon a chalk, or hard rock, proper for the culture of rye, barley, trefoil, cinquefoil, and the annual trial for turnips. The whole amount to about two thousand one hundred and forty acres, and rented on an average, at nine shillings the acre.

The enclosed pastures in severalty, which lie in, and near the village, and hamlet of Kneefworth, are an open, brown, gravelly soil, of a good staple, are taken with the arable land, and rented at the same price. The common contains about one hundred acres, is a clayey soil, depastured without stint by cows, sheep, and horses.

The largest farm is occupied under a lease of fifty years, at two hundred pounds per ann. and adhering, with the rest of the parish, to the old common field husbandry without any expence in artificial manure, produces

20 bushels of	Wheat
26 ditto	Barley
26 ditto	Oats
20 ditto	Rye
16 ditto	Beans and Peas per acre.

There is no preference given to any particular breed of stock, but both sheep, and cow cattle, would be greatly improved, by an enclosure of the parish, which amongst the most intelligent farmers here, is greatly desired. Eleven hundred and forty sheep are kept here, amongst which, the rot, in the year 1792, prevailed, but to no very alarming extent. There are                    houses,                    distilleries, families, and                    souls, and the poor's rates are four shillings in the pound.

LITLINGTON

*LITLINGTON.*

THE land lying northward of this parish, and adjoining thereto, is a gravelly soil, of a tolerable staple ; but thence extending westwardly, and towards Royston, a thin, dry, white soil, presents itself upon a chalk, or hurrock, proper for the culture of barley, rye, trefoil, cinquefoil, and turnips. This field contains about two hundred and fifty acres, and is rented at five shillings and sixpence per acre. The other two fields, answer the same description, which contain about five hundred acres, rented at the same price, and may be appropriated in the same manner. The enclosures in severalty, contain about forty acres, and are rented at eight shillings the acre. There is besides in this parish, a common of fifty acres, subject to frequent overflowings from the Abington mill stream ; in its present condition, it is esteemed of little value, and is depastured at will, and without stint, by horses, and cows.

The largest farm here, is occupied at will, at the annual rent of one hundred and twenty pounds ; the open field husbandry, assisted at times with a little oil cake dust, produces per acre

Wheat	12 bushels
Barley	14 ditto
Rye	12 ditto
Oats	12 ditto

No expectation that an enclosure would answer from the certain difficulty of raising live fences, upon the chalk, in the upper furlongs. About six hundred of the common Cambridgeshire sheep, are kept tolerably healthy. Forty-

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six houses, fifty distinct families, two hundred and souls by computation, and the poor's rates, three shillings and sixpence in the pound.

*ABBINGTON, (enclosed.)*

THIS parish has been enclosed about twenty-two years, and although great expence has since been incurred, on a score of fencing; yet on the present day, the business is generally done, at much less expence, than before the enclosure. The soil is of a white, clayey nature, of a good situation upon a woodland, or yellowish coloured clay, and lies upon a good inclination for draining. These lands are proper for the culture of wheat, barley, oats, peas, beans, and clover, which containing about seven hundred acres of arable, and one hundred and fifty acres of pasture, are taken together and rented on an average, at sixteen shillings the acre.

Hollow draining is here but little attended to, though the land is of such a nature, as to require it very generally, the reason given for this neglect is, that the farms are generally held at the will of the proprietor. The common husbandry is of two crops, and a fallow, without any foreign aid, in the articles of manure, produces

Wheat	18 bushels per acre
Oats	20 ditto
Barley	24 ditto
Peas and Beans	14 ditto

There are about five hundred sheep, of the common breed, which have hitherto escaped, tolerably well, from the plague kept in this parish, which contains twenty-five hundred and two

twenty-nine families, and one hundred and forty-five souls; the poor's rates are two shillings and eight-pence in the pound; and the tythes of the parish, are commuted at ninety guineas per ann.

### GUILDEN-MORDEN,

*Including the Hamlet of ODISSEY.*

**E**AST of the village, and adjoining the enclosures, are about sixty acres of strong, wet, clayey land, lying upon a gault, proper for the culture of permanent pasture, and of wheat, beans, peas, clover, and black oats; on the north, a brown, strong mould, of a fair staple, upon a brick earth, in which there is a mixture of loose gravel; this may be very well employed in the culture of wheat, barley, oats, peas, clover, and turnips, upon two furrow work. West of this, is a well stapled black mould, upon a chalky marl, but of a soft, and soapy nature, and proper for the culture of most of the common grains, pulse, and grasses, saving white peas, rye, and cinquefoil: the whole amounts to about two hundred acres. On the west of the village, the lower part of the field answers to the gaulty land first described, and contains about two hundred and fifty acres. Southwardly, and adjoining the village, a black earth, of a good staple, upon a gravel; thence southwardly, a brown mould, of a fair staple, upon a hurrock: thence extending to, and binding upon the enclosures of Odissey, a dry, thin, white soil, upon a chalk. The whole containing about two hundred and fifty acres, is proper for the culture of barley, turnips, and the artificial grasses, and taken with the common fields before described, is rented at eight shillings the acre.

The Hamlet of Odissey, contains about two hundred and fifty acres, is an enclosure in severalty, and tythe-free. It is in general, a thin, chalky soil, on which cinquefoil is cultivated to great advantage. The enclosures in several which lie in, and near the village, contain about one hundred acres, and are rented at one pound per acre. The meadow, or lammas-ground, is of a low moory nature, and much annoyed by the pressure of water from the mill-stream, by which it is bounded; it contains about fifty acres, and is valued at six shillings the acre. The common is situated by the side of, and subject to much inconvenience from the said mill-stream: the soil is of a clayey, and gravelly nature. Another common, called the marsh, of about equal extent, is depastured with the common, from May till November with cows, and from the end of harvest till Lady-day with sheep. These commons, contain each about eighty acres.

The largest farm in this parish, is held under a lease for twenty-one years, at the annual rent of three hundred pounds. The common field husbandry obtains, which, assisted with oil-cake dust, malt dust, pigeons dung, and old woollen rags, at five shillings and three-pence per hundred weight, ten hundred weight per acre, amounting to five guineas and a half expence per acre, produces

22 bushels of	Wheat
28 ditto	Barley
26 ditto	Oats
18 ditto	Peas and Beans per acre.

There are about one thousand sheep kept in this parish, of the west country breed; the wethers of which, when fattened to the bone, at three years old, will weigh about eighteen pounds per quarter, and have about four pounds

of wool to each fleece, which is of the third quality for cloathing. These sheep were greatly preserved from the rot in the year 1792, by the relief given to the wet, and low lands, from open, and hollow draining. The Leicestershire and Derbyshire cow cattle are thought preferable to any other.

Were the commons in severalty, and the property in the open fields, laid together, and in large pieces, great improvements would be made on the stock and husbandry of this parish; which contains sixty-six houses, seventy-six families, and by computation, three hundred and eighty souls; and the poor's rates are half a crown in the pound.

### STEEPLE-MORDEN.

**N**ORTH of the village, taking the church for the centre, is a stiff clayey soil, lying very flat, upon a bed of blue clay, or gault; about a third of this field inclines to a gravel, but still lying very flat, and difficult to drain: it contains about four hundred acres, and is rented at eight shillings per acre: this field is proper for the culture of wheat, barley, oats, peas and beans mixed, and clover. South of the village, the soil is of a thin, dry nature, upon a chalk and gravel, applicable to the culture of barley, oats, rye, peas, tares, cinquefoil, trefoil, and turnips: it amounts to about fifteen hundred acres, and is rented at five shillings per acre. The ploughed land, immediately adjoining Odyssey, and included in the above, is generally valued at one shilling per acre. The heath binding thereon, which lies as a sheep walk, contains about three hundred acres, but to which no specific value is annexed. The enclosures in severalty, .



veralty, parts of which are under the plough, are of a good staple, upon a blue and yellowish coloured clay, and void of gravel; they contain about three hundred acres, and average a rent of fifteen shillings the acre.

The largest farm in this parish is held at will, at an annual rent of one hundred and twenty pounds. A fine quantity of oil cake, and malt dust, is occasionally used, which assists the common husbandry in the open fields, produce

16 bushels of	Wheat per acre
22 ditto	Barley
20 ditto	Rye
18 ditto	Peas and Beans
24 ditto	Oats

The rotation of crops in the enclosures, are occasionally varied; produce

22 bushels of	Wheat per acre
28 ditto	Barley
22 ditto	Peas and Beans
32 ditto	Oats

There are about twelve hundred sheep, of the west country and common Cambridgeshire breed, preserved in good health and condition, by the pains that are taken in the cultivation of artificial food, in the upper parts of the parish, and in the drainage of the lower. The same cow cattle preferred as at Gilden-Morden. The very judicious method of hollow draining, and using therein straw only, is practised with success, by a very intelligent and industrious farmer, Mr. Strickland, of this parish; which contains eight families, four hundred souls, and the poor's rates are twelve shillings and six-pence in the pound.

SHINGA

SHINGAY, (*enclosed.*)

THE soil in general, may be described, a strong, brown, earth, lying upon a gravel, and a stiff, wet clay, of a thin staple, upon a gault; the whole lies rather indifferently for draining, contains about six hundred and fifty acres; about fifty acres of which, are arable, and averages with the pasture ground, about eighteen shillings per acre; this valley, through which the river Cam flows to Walton, is chiefly laid out into dairy farms, and hence it has its name, *i. e.* the Dairies. A very serious calamity prevails amongst the cows, that are here depastured, that of slipping their calves; this accident generally happens when the cow has gone twenty-one weeks or rather better than half her time, with her *second calf*, which at the time of exclusion is found to be much smaller than might reasonably be expected, and in general appears to have been dead for some length of time. In this parish, within these five years in a dairy of twenty-three cows, a loss of ninety calves has been sustained. There are about four hundred and fifty breeding sheep depastured with the milch cows in this parish; which contains six families and sixty-six persons; and the poor's rates are sixpence in the pound.

TADLOW, (*enclosed.*)

EAST of the church, and upon the hill, the soil is a wet, strong, loam, of a fair staple, lying upon a yellow clay; it lies well for draining, and in a drained state might be advantageously employed, in the culture of wheat, barley, oats, peas,

peas, beans, and clover. It contains about five hundred acres, the higher parts of which are rented at eleven, the lower at fifteen shillings per acre. On the north, the soil is very fine, like the first described, of which there are about four hundred acres; rented as before and may be employed to advantage in the like manner. On the south the land is of a superior quality, and on which there is a large proportion of swamps, which is valued at eighteen shillings per acre, and is generally depastured by cows. The arable is valued at fifteen shillings per acre, which is about the average of the whole parish, where all the farms are occupied at will, owing to the uncertainty of title to the estate, which is in dispute between the present possessor, and the trustees for Downing College.

The largest farm is rented at about three hundred pounds per ann. and following the common husbandry of two crops and a fallow, produces per acre

22 bushels of	Wheat
32 ditto	Barley
22 ditto	Oats
15 ditto	Peas and Beans

There are about one thousand and sixty sheep of the Cambridgeshire breed, kept in this parish, amongst which the rot of the year 1792, produced great mortality; the whole flock of one farm, was carried off, and the greater parts of the others, perished by this disease; which is attributed to the bad drainage of the land, an evil which the farmers, are now endeavouring to avert in future by horse draining. There are here thirteen houses, nineteen families, and by computation, ninety-five souls, and the poor's rate is one shilling and sixpence in the pound.

HAT

*HATLEY ST. GEORGE (enclosed.)*

THE following information was procured, by —  
 QUINTIN, Esq. a Gentleman to whom I feel much indebted for his politeness and hospitality.

On the east of the village (taking the church for the centre) the soil is of a thin, cold, clayey nature, lying upon a gault, proper for the culture of wheat, black oats, peas, and clover; of this there are about one hundred acres, which, taken with the pasture ground in the same direction, amounting to about fifty acres, is rented at fifteen shillings the acre. On the south, a well stapled, black mould, upon a clay, proper for the culture of wheat, barley, oats, peas, beans, clover, and turnips, upon two furrow work; this amounts to about one hundred and fifty acres, and taken with the swarthe or grass land, in the same direction, is rented as before mentioned. On the west, the soil is similar to that described on the east of the village, comprising about two hundred acres, which are rented at twelve shillings and nine-pence the acre. About one hundred acres, lying north of the village, may come under the same description, and are rented at six-pence per acre less. Thence extending north-eastwardly, the soil improves into a deep, strong, black mould, affording a very rich and luxuriant herbage; of this there are about the like number of acres, which are rented at eighteen shillings the acre.

The farms here, are generally occupied under leases of three, six, nine, or twelve years; the largest does not exceed one hundred and seventy pounds per ann. and under

M

the

the common routine of husbandry, of two crops and  
fallow, (as the leases import) produces with the rest of  
parish

17 bushels of	Wheat per acre
22 ditto	Barley
22 ditto	Oats
17 ditto	Peas and Beans

About nine hundred sheep, of the common breed,  
kept here; of which number, one third perished by the  
of 1792. This calamitous circumstance, is gener-  
ascribed to the wetness of the land, some of which  
very flat, though the greater part of it inclines well  
draining; which improvement would take place very ge-  
rally, were the farmers encouraged, by the benefits  
would by this means result, and protected, under leases  
twenty-one years.

There appears to be a thriving growth of oak in  
neighbourhood; the undergrowth is cut every twelve years  
and nets to the proprietor about nine pounds the acre. The  
bark is estimated at about twenty-five per cent. upon  
value of the timber.

In this parish are twenty-five families, and one hundred  
inhabitants, exclusive of Mr. QUINTIN'S Establishment  
which consists of fifteen persons. The poor's rates  
twenty-pence in the pound, and the whole parish is ty-  
free. Although this country is in general healthy,  
scarcity of springs throughout the whole of it, is a  
circumstance much to be regretted.

CROWDO

*CROWDON.*

**N**O information. The soil here appears to be of a strong, brown, loamy nature, affording very fine pasturage for milch cows, and store cattle ; though apparently inferior to

*WYNDEE,*

The land in general through which parish, consists chiefly of rich pastures, employed in the feeding of ewes and lambs with milch cows. The soil is a deep brown loam, lying upon a gault and gravel, affording a most excellent herbage, and comprising about six hundred acres ; are rented at twenty shillings per acre. The meadow, which binds upon the brook that divides this parish from Crowdon, is much injured, by the frequent overflowings of that stream : this diminishes its value, which otherwise would be very considerable.

The Derby and Leicestershire breeds of cow cattle are most approved ; but here the same calamity as was before noticed at Shingay, appears to exist in a high degree. In a dairy of twenty cows, ten of them slipped their calves two years since. These accidents seem to prevail generally through this valley, to a greater or less extent, than in this parish, and all seem to be under the same circumstances with those at Shingay. About six hundred and fifty of the west country sheep are fed here, amongst which, the rot is only observed with those, that are brought in thus afflicted. There are twenty families, and according to computation, one hundred souls in this parish, where the poor's rates are fifteen-pence in the pound.

*ORWELL WHADDON.*

**N**O information. The land about this latter village (the houses in which are much scattered) consists of a strong, dark, friable mould, which, in a direction towards Wimpole Park Gate, gradually changes to a reddish colour, and seems well adapted to the barley and turnip husbandry. Many of the sheep in these fields, have the melancholy and fatal symptoms of the rot.

*ARRINGTON (enclosed.)*

**T**HE soil, east and south of the village, is of a cold and clayey nature, lying upon a strong, close, and compact gault. West of the village, the soil runs of a fair staple, upon a chalk and hurrock; and northwardly it is of a fair staple, upon a hurrock, and yellow clay; the whole includes about one thousand acres, and taking the arable and pasture together, is rented at twelve shillings per acre; a considerable quantity of well mixed land was observed towards Kneefswell, bearing upon some parts a very fair crop of turnips, and a large tract of land in that direction, appeared to be well adapted to that husbandry upon two furrow work. The largest farm here is occupied under a lease of nine years, at three hundred pounds per ann. which under the common practice of two crops and a fallow, produces with the aid of some artificial manure,

17 bushels of	Wheat per acre
22 ditto	Barley
22 ditto	Oats
12 ditto	Peas and Beans.

About

About five hundred sheep, of the common breed, are kept here, some of which have perished by the rot of the year 1792. It is expected that the improving state of the drainage, together with the additional quantity of artificial food, that is now, and will hereafter be provided; will on a future day, be the means of averting this dreadful calamity. There are twenty-one families, and the like number of houses; one hundred and five inhabitants, and the poor's rates are sixpence in the pound.

### WIMPLE.

THE following observations, were made by Mr ROBERT HARVEY, and communicated by letter from Lord HARDWICKE.

The soil is observed, to be a light coloured mould, free from stones, about the depth of four inches, lying upon a strong, clay, or gault. It is in general very wet, but capable of being highly improved, by ditching and hollow draining: it appears to lie in about equal quantities, of pasture and plough land. The old swarthe, produces a very indifferent herbage, but may be much improved, by breaking up, and cultivating artificial grasses, together with proper management afterwards. The cow cattle and sheep, are of the common breeds, but may be improved.

The farms in general are small, and under the present husbandry, of two crops and a fallow, assisted by an occasional expence of forty shillings per acre, in foreign composts, produce at present

20 bushels of	Wheat
24 ditto	Barley
18 ditto	Oats
16 ditto	Peas and Beans

At.



At this time no turnips are sown, and but little clover, though both would answer extremely well, under the tilth, barley, and turnip husbandry. The whole of this parish is enclosed, and the enclosure appears to have increased its population. Hollow draining, and ditching, were much neglected, until the accession of the present Earl of Hardwicke to his estate. In the winters of 1792, and 1793, five thousand and six hundred poles of hollow ditching, and four hundred and forty poles of open ditches, six feet wide, and four feet deep, were executed, all which, appear to answer so well, that the farmers in general, throughout the neighbourhood, are following the example. The rot in sheep, has prevailed here, to a very alarming extent, and is ascribed to a coarse sort of bad grass, which grows upon ill drained land; the red water likewise prevails, and is attributed to the same cause: in a certain degree, change of food, appears to be a remedy for this latter disease.

Hollow draining is here very much improved, and would be more generally in practice, were the leases for twenty-one years. The paring, and burning the thin stapled lands, in this neighbourhood, is very justly reprobated, by the most candid, and intelligent farmers here; where it has been done, but not approved of, in the staple land. Including the Earl of Hardwicke's establishment, there are thirty-six houses, forty-seven families, and two hundred and fifty-six inhabitants, and the poor's rates, are twenty-pence in the pound.

In addition to the foregoing, it is necessary to state the following curious fact. Wimple park, contains about four hundred acres, and is at present, depastured by deer, sheep, and cow cattle; amongst the former, a disease does, and has prevailed for some years past, which in some degree,

may be compared, from its resemblance with the very extraordinary one, observed amongst the sheep, in the neighbourhood of Ashley. The first symptom of the disorder, observable in the deer, is similar to that amongst the sheep; which is an apparent uneasiness in the head, and the rubbing of its horns against the trees, (this action however is common to deer, at particular seasons, in all countries, whether in a perfectly wild, or more domesticated state) but the most extraordinary effect of this disease is, that the animal appears to labour under a sort of madness, in pursuing the herd, which now flee before him, and endeavour to forsake him; trying to bite, or otherwise annoy them, with all his strength and power, which soon being exhausted, he becomes sequestered from the rest of the herd, and in that deplorable state of the disease, breaks his antlers against the trees, gnaws large collops of flesh, from off his sides, and hind quarters, appears convulsed for a short time, and soon expires.

The greater part of the stock of deer, which were very numerous in this park, have been carried off by this dreadful disorder, in the course of the last three years. In the months of July, August, and September, and when in full pasture, they are more subject to its fatal influence, than at other times, though it prevails to a certain degree throughout the year.

### *BARRINGTON.*

THE arable land lying north-east of this village, consists of a hurrocky, dry soil, proper for the culture of cinquefoil; north-west is a strong, brown earth, of a good staple, upon

upon a retentive clay, or reddish coloured brick ea  
proper for the culture of wheat, barley, clover, peas  
beans mixed, and oats. The lower part of this field,  
well stapled clay or loam, lying upon a bed of chalky n  
of a soft and soapy nature, proper for the culture of e  
species of grain, pulse, and grasses. The whole cont  
about six hundred acres, and is rented together, at c  
shillings per acre. The middle field, agrees with the a  
in soil and value, and contains about five hundred ac  
The west field comes under the like description, and e  
taining about five hundred acres, is valued as before,  
may be employed in the same manner. The enclosed past  
in severalty, lie in, and near the village; the soil of w  
agrees with the lower part of the field first described; u  
contain about one hundred and sixty-three acres, and  
rented at one pound per acre. There are besides, th  
acres of moor, or common, depastured by sheep and co

The largest farm is occupied at will, at the annual  
of one hundred and thirty pounds, which, with the ro  
the parish, under the common field husbandry, aff  
occasionally with light composts, produces

20 bushels of	Wheat per acre
20 ditto	Barley
18 ditto	Oats
12 ditto	Peas and Beans

Four hundred and twenty sheep of the common breed  
here kept, one half of which perished last year by the  
but the prospect at present is much more agreeable.  
South down, and Romney-marsh breeds, have been t  
and promise very well. The Suffolk breed of cows is  
fered.

Little attention is paid to hollow ditching, though much would be done, were the open fields enclosed; the laying of the intermixed property together, is particularly desired. This parish contains ninety families, and by computation, four hundred and fifty souls; and the poor's rates are two shillings in the pound.

It may not be amiss to observe, that Mr. BENDITCHE has documents by him, which shew that a considerable part of his estates in this parish, and at Foxton, were let a century ago, at an actually higher rent than is given at this time. This cannot be ascribed to old grants, and tenures, because the estates were held chiefly by tenants at will; but it strongly proves, that so far from the agriculture in this neighbourhood having been progressively improving, for the last hundred years, it has been greatly on the decline, and the country of course, taking the value of money, &c. &c. into the account, must at present be far less productive, than at that period.

### *HARLETON & HASLINGFIELD.*

No information. . But of both these parishes, a very fair judgment, as to the nature of the soil, may be formed by reference to

### *EVERSDEN,*

The soil of which, in the low common field, may be described under three distinct heads, (viz.) that binding upon the brook, is a well stapled loamy gravel, proper for the culture of wheat, barley, oats, rye, peas, clover, and tur-

N

nips :

nips: adjoining this, and approaching the village, the soil is of a thin, cold, clayey nature, lying upon a gault, and demanding a very different husbandry to the last described. The remainder of this field, extending towards Kingston, is of a thin, dry staple, upon a chalk, but which may, with proper management, be advantageously employed in the culture of wheat, barley, oats, peas, rye, clover, cinquefoil, trefoil, and turnips. The whole field contains about three hundred acres, and is rented at nine shillings the acre.

The soil west of the village, (taking the church for the centre) is a thin, cold, brown clay, in which there is a mixture of small chalk stones: this land is greatly injured from the badness of the drainage, and thereby rendered inferior to the other fields. The drainage here might be made very compleat, in which case the land would be profitably employed, in the culture of wheat, barley, peas and beans mixed, oats, and clover: it contains about three hundred acres, and is rented as before mentioned.

The lower part of the church field, on the east of the village, consists of a strong, deep, white earth, of a marly and mellow nature, upon a chalk: this land properly drained, might be employed in the culture of every species of pulse and grain, to which might be added, clover, trefoil, and turnips. Beyond this, extending towards Orswell, the deep, white loam is lost in a cold, brown, tough, thin clay, upon a gault. This field also contains about three hundred acres, and is valued as before.

The improved pastures in severalty, contain about forty acres, and are rented at twenty shillings per acre. An equal number of acres of the second quality, in a very rough and unimproved state, are valued at ten shillings per acre.

Under

Under the present circumstances of the parish, no other than the old common field husbandry can be practised, which, assisted at times by light hand dressings, produces

16 bushels of	Wheat
24 ditto	Barley
18 ditto	Oats
10 ditto	Peas and Beans per acre.

Some of the hurrock, which is of a soft and soapy nature, has been tried upon the cold, close clay, at the rate of fifteen hundred bushels per acre, and found to answer very well. Lime has also been used with good effect.

The obstinacy of some of the farmers in this parish, has defeated the very laudable and spirited exertions, of a very industrious and intelligent young man, by stopping the passage of the water in the leading drains, into which his hollow drains in the open field discharged their water. His drains in consequence have blown up, and a considerable expence has been incurred to produce only a mortifying disappointment. They have also served him with notice to refrain at his peril, from the cultivation of turnips in the open field.

The cows here are very liable to slip their calves; a loss of twenty has been sustained in a dairy of fifteen cows, within these three years. Were the lands laid in severalty, and enclosed, or fenced in, at the option of the owner, or tenant, a very great benefit would arise to the country in general. About two hundred of the common sheep are kept, and no preference given to any breed of cows. There are twenty-six families, and by computation, one hundred and thirty souls; and the poor's rates are two shillings in the pound.

*COMBERTON.*

**N**O information, though much promised. The general character of its soil may be well conceived by reference to

*BARTON,*

WHERE the soil, binding east upon the village, is a well stapled loamy gravel, upon a gravel, and proper for the culture of wheat, barley, and the two furrow turnip work; this amounts to about one hundred and fifty acres, and is rented at nine shillings the acre. Thence extending eastwardly, and ascending the hill, a tough, cold thin clay, upon a gault, proper for the culture of wheat, peas, beans and black oats; of this there are a like number of acres of the same value. North of the village, and adjoining the enclosures, is a white tender clay, or loam, of a good staple, upon a clay and gravel, proper for the culture of wheat, barley, oats, rye, and clover: Thence, extending northwardly, the staple shallows into a thin, cold clay, upon a gault, and applicable to the culture of wheat, beans, black oats, and clover. The whole of this field contains about three hundred acres, and is rented as before. West of the village are about one hundred acres, of warm gravelly land, proper for the barley, rye, and turnip husbandry. Thence extending south, and westwardly, is a thin, tough, cold clay, upon a gault; and proper for the culture of wheat, beans, clover, and black oats; of this there are about two hundred acres bearing the same value. Whitwell Farm answers this last description in soil and value. The enclosures in severalty contain about one hundred and twenty acres, and are rented at one pound

six shillings the acre. The largest farm is held at will, at the annual rent of two hundred pounds, and the only variation from the common field husbandry, is, that clover is sometimes sown in the place of oats. As much dung as possible is procured from Cambridge, which brought in aid of the produce of the farm, it yields

20 bushels of	Wheat per acre
22 ditto	Barley
24 ditto	Rye
22 ditto	Oats
14 ditto	Peas.

The enclosing, or at least laying the intermixed property in the fields together, is much wished for. There are eight hundred of the common sheep kept here; and no sort of preference with regard to cow cattle. There are thirty-one houses, forty-two families, two hundred and ten persons by computation, and the poor's rates are four shillings in the pound.

### GRANTCHESTER.

THE village is bounded on the east by half-yearly meadows, which extend to the River Cam; are similar to the Trompington meadows before described; contain about fifty acres, and are rented at twenty shillings per acre. South of the village, there are about one hundred acres of deep, black, friable mould, lying upon a clay, proper for the culture of wheat, barley, oats, peas, and turnips, upon two furrow work. Extending westwardly from hence, there are about sixty acres of thin, cold, wet, clay land, upon a gault; thence, and composing the middle of the field, are about one hundred and forty acres of a well-mixed



soil, upon a clay and gravel, and proper for the culture of the crops first mentioned. North-west of the village, and adjoining the enclosures, are about one hundred acres of a deep gravelly loam, upon a clay. Thence in the same direction, ascending the hill, are two hundred acres of cold, clayey land, upon a gault. North-east of the village, and adjoining the meadows, are about one hundred acres of deep, rich loam, lying upon a clay; but thereon, and extending north from the village, are two hundred acres, of a cold, clayey nature, upon a gault. North-west from Grantchester, are about one hundred acres more, in this thist, of a well steepled mixed soil, upon a clay and gravel. The whole amounts to about one thousand acres, and rented on an average, at nine shillings and pence per acre.

The enclosed pastures in severalty, contain about one hundred acres, and are rented at twenty-six shillings per acre. The largest farm is occupied under a lease for two years, at the annual rent of three hundred pounds. Clover sown sixteen pounds to the acre of the best of feed; in the second, or breach crop field, in place of which is the only deviation from the old practice of husbandry, which with as much manure as can possibly be produced from Cambridge, gives a produce on the general average

Wheat 24 bushels per acre

Barley 30 ditto

Oats 22 ditto

Peas 18 ditto

Beans 18 ditto

There is no enclosure at present in contemplation, but much wished, that the intermixed land, in the several parishes, should be laid in severalty, and together. About one hundred of the common breed of sheep, are kept in the

parish; the cow cattle are similar to those in the neighbouring villages. There are forty-one houses, fifty-three distinct families, and by computation, two hundred and sixty-five inhabitants, and the poor's rates are three shillings in the pound.

### COTON.

**T**O the east of the village, and a butting on the bounds of Cambridge, a strong brown soil, of a fair staple, lying rather flat, upon a clay, and difficult to be drained; of this, there are about one hundred and seventy acres, rented at ten shillings per acre. West of the village, there are about thirty acres of mixed soil, worked in the same shift, of a good staple, upon a gravel; upon this latter, turnips may be cultivated to advantage; on the former, wheat, barley, oats, peas, beans, and clover. South of the village, and extending along the side of the hill, towards Barton, is a thin, white soil, upon a clay; upon the top of the hill, is a strong, brown, heavy earth, upon a reddish coloured clay, or brick earth: the lower part of this field consists of a dark brown mould, of a good staple, upon a clay, and contains about two hundred acres, rented as beforementioned. There are about one hundred and twenty acres of enter-common, with Grantchester, of a mixed soil, and valued with the other arable land. North of the village, is a loamy, well stapled soil, lying upon a gravel, and proper for the culture of wheat, barley, oats, rye, peas, clover, and turnips; this comprises about two hundred acres, and is rented at the same price with the foregoing. The enclosures in severalty, contain about fifty-five acres, and are rented at twenty-five shillings the acre.

The largest farm in this parish, is rented at one hundred and sixty pounds per ann. which under the common mode of husbandry, assisted by a great quantity of dung, purchased at Cambridge, at half a crown per load of three horse with the rest of the parish, produces

22 bushels of	Wheat
24 ditto	Barley
24 ditto	Oats
20 ditto	Peas and Beans per acre

There are about six hundred sheep of the common breed kept in this parish, one sixth part of which, in the course of last year, perished by the rot. There are twenty-four houses, thirty distinct families, and one hundred and twenty souls, and the poor's rates are two shillings in the pound.

### *MADINGLEY.*

FOR the particular information procured in this parish, I am wholly indebted to Sir JOHN HIND COTTON, whose readiness to afford the fullest, and most complete information to the Board, was only to be equalled by his very courteous and polite reception, and the unbounded hospitality I was honored with.

The arable land in this parish may be described as a light coloured cold clay, of a thin staple, upon a gault, of an extremely close and retentive nature; in the hollows and low parts of the fields, the soil is found to improve in staple, becomes of a more tender and manageable nature; it is proper for the culture of wheat, barley, oats, peas, beans, clover; contains about one thousand and thirty acres,

is rented at six shillings per acre. To this another rent may be added of four-pence per acre, per head, for sheepwalk, and two-pence per acre, for cow cattle, equal in the whole, to six shillings and six-pence per acre. The improved pastures in severalty, contain about fifty acres, rented at one pound per acre; those in a rough and unimproved state, are not valued at more than half that sum. There are about thirty-five acres of cow common, at present very ill drained, and chiefly covered with ant-hills, and thorns, valued at five shillings per acre, but were they in severalty, they would readily be improved, to three times their present value.

The farms in this parish, are all held at will, the largest of which, is rented at one hundred and twenty-two pounds per ann. The common husbandry of two crops and a fallow, assisted by a small quantity of pigeons dung, produces

15 bushels of	Wheat per acre
20 ditto	Barley
20 ditto.	Oats
8 ditto	Peas and Beans

The whole of the lands in the open fields, lie in large pieces; as such, no enclosure is meditated or desired. Gripping is much practised, but very little hollow draining, on account of the great closeness of the land, which prevents the drains from drawing, (particularly in Sir John Cotton's domain) and the looseness of the soil in other places; though on a more particular examination, I was not able to establish the force of this latter objection. Including Sir John Cotton's establishment, there are twenty-seven distinct families, and one hundred and fifty souls. About seven hundred sheep of the common breed, are kept in this parish, two hundred of which, perished in the year 1792, by the

fatal disease of the rot, which has been frequently observed to have been brought on, by their depasturing upon the low lands, skirting upon the fens. The poor's rates are twenty two pence in the pound.

### *DRY-DRAYTON.*

ON the east of the village, is a thin, cold clay, upon a gault, proper for the culture of wheat, beans, peas, black oats, and clover ; of this there are about six hundred acres which lie rather too flat, and but indifferently well for draining. North of the village, is a brown, tender clay, of a good staple, mixed with gravel, lying upon a reddish coloured clay, or brick earth, well for draining, comprising about six hundred acres, proper for the culture of wheat, barley, oats, peas, clover, and turnips, upon two furrow work. South of the village, the soil is very similar to that, described on the east, but in which is found a troublesome rag stone. This field contains also about six hundred acres, and though greatly inferior, to the last described, is taken with the other two on an average of six shillings and eight pence per acre. One hundred acres of rough sheep-walk, which might be greatly improved by draining, and opening the soil with the plough. About forty acres of the most improved pastures, which lie in, and near the village, are rented at twenty shillings per acre ; the remainder, consisting of about sixty acres, are valued at fifteen shilling per acre.

The farms in this parish, are all held at will, the largest of which, is rented at one hundred and ten pounds per ann

Th

The common field husbandry, which is the practice here, produces

16 bushels of Wheat per acre
20 ditto Barley
20 ditto Oats
20 ditto Peas

About one thousand sheep, of the common breed, are kept in this parish, one half of which fell a sacrifice to the rot in the course of last year, imputed to the bad state of drainage in the open fields. Some hollow draining is done between the lands, and were the parish enclosed, which is much desired, that practice would become general, and great improvements would result from it. There are fifty families in this parish, and by computation, two hundred and fifty souls; and the poor's rates are four shillings in the pound.

### *LOLWORTH.*

THE arable land in this parish, lies in three open common fields. The soil of which may be described, a tender clay, of a good staple, lying upon a gault, and reddish coloured, brick earth, proper for the culture of wheat, barley, peas, beans, oats, and clover: the whole of which contains about six hundred and fifty acres, and is rented at ten shillings per acre. About fifty acres of cow common, abutting upon Swasey and Long-Stanton, are valued with the fields.

The enclosures in severalty, contain about ninety acres, and are rented at twenty shillings the acre. The largest farm in this parish, is occupied under a lease of twenty-one years, at the annual rent of one hundred and seventy pounds.

The common husbandry, of two crops and a fallow, aided by considerable quantities of mould, mixed with farm-yard, and stable dung, with light composts of pigeons dung, oil-cake, and cinder dust, produces

Wheat	20 bushels per acre
Oats	24 ditto
Barley	24 ditto
Peas and Beans	20 ditto

Clean beans are often sown, and sheep fed, which is found to answer very well. About six hundred of the common sheep are here kept, amongst which there has not been the least appearance of the rot; this is attributed to the good state of the drainage in the open fields, where much gripping and hollow draining has been done, and where, should an enclosure take place, it is thought, that in ten years, the land would be improved to the value of twenty shillings the acre. There are ten families, and fifty-eight persons, by absolute enumeration, in this parish; and the poor's rates are two shillings and three-pence in the pound.

### *BOXWORTH.*

**H**AVING surveyed this parish some years ago, the following was then the state of it, and since that time, no material alteration appears to have been made.

The whole of this parish lies within a ring-fence, and containing two thousand one hundred acres; is the sole property of one Gentlemen. There are nine hundred acres of arable in three open fields, rented at eight shillings the acre. The soil in general may be described a brown, strong earth, of a fair staple, lying upon a soft yellow; and

and a strong blue and reddish coloured clay or brick earth. The field binding upon Lolworth, is of a more tender and manageable nature, than the other fields ; which abut upon Conington, Knapwell, and Childersley. The whole lies in large pieces, very conveniently for draining, and in a properly improved state ; might be well employed in the culture of wheat, barley, oats, peas, beans, clover, and cole-seed for winter food. There are about two hundred acres of improved pasture ground, valued at twenty shillings, and the like quantity of inferior pastures, valued at ten shillings per acre : besides which, there are one hundred and twenty acres of elm wood land, which flourishes in this soil particularly well. The remainder amounts to about seven hundred acres, and consists of very coarse, rough, pasture grounds and commons, which at present cannot be valued at more than five shillings per acre, though they might be improved in the course of a few years, to the net value of fifteen shillings per acre, by hollow draining, stubbing and levelling the ants-hills, at an expence from fifty to sixty shillings per acre, which would render them completely fit for the plough, under which they might be kept for about three crops, and then laid down for permanent pasture with great advantage.

The only deviation from the common husbandry, of two crops and a fallow, is that of taking a crop of clover sometimes, in the second, or breach field, in the place of oats. The number of sheep is estimated at fifteen hundred, amongst which the rot has prevailed to a very great extent, chiefly imputable to the very bad state of the drainage. The produce, population, and poor's rates, from the absence of the farmers, were not ascertained.

The farm houses and cottages, form a most beautiful village, well situated, and in excellent repair : were the land in the same highly improved state as the village, there  
would



would be no doubt of its being by far the most valuable and desirable estate, for its extent, (except Shudy C of any parish in the highland part of the county. tythes are commuted at three shillings and nine-pence per acre, crop and fallow.

*CONINGTON.*

BEING trifled with here, and deceived, was prevented from receiving any information.

*GRAVELY.*

OMITTED through mistake, being informed that the parish was in the county of Huntingdon.

*PAPWORTH EVERARD.*

NO information.

*ELSWORTH.*

NO information.

These four parishes may be described to be a cold, stiff soil, lying upon a stiff blue, and a wet, yellow clay, with a natural chill of which is much increased, from the present state of its drainage; and to which, (from the conversation I held, with many of the shepherds, in crossing the country) is to be ascribed the rot in the sheep. The country, in general, wants springs and good water, although it is well for draining. Its present value to landlord and tenant may be estimated by that of

*ELTSLEY,*

THE arable land in which parish, is a tender, cold clay, lying very flat, and difficult to drain, upon a yellow clay, or woodland earth; it amounts to about

hundred acres, and is rented at six shillings and eight-pence per acre. The soil of the enclosures, resembles that of the open fields, producing a coarse, sharp, four grass, applicable to the feeding of milch cows, and store cattle only. About fifty acres however, of these enclosures, being in a more completely drained, and improved state, put forth a tender and more generous herbage, and may be fairly valued at twenty shillings the acre. The remainder of the enclosures, which are partly under the plough, and in coarse pastures, are valued together, at about twelve shillings the acre.

The largest farm, is held at will, under a rent of one hundred and fifty pounds per ann. which, with the rest of the farms in the parish, under the common husbandry, assisted occasionally with fifty bushels per acre, of pigeons dung,

produces	18 bushels of Wheat
	22 ditto Barley
	20 ditto Oats
	10 ditto Peas and Beans per acre.

There are about twelve hundred sheep, of the common Cambridgeshire breed kept here, seven hundred of which, perished by the rot, in the course of last year; the present prospect is something mended, though as the sheep still continue to die, it is greatly apprehended, that most of the diseased sheep, will be carried off in the course of the spring. It has been observed, that in the first stage of this disease, the liver has not been infected with the snails, or plaice; it has preserved a vivid sound appearance, but when touched, was found tender, and rotten, and in every respect like cold, and coagulated blood. This stage of the disease, or rather the disease itself, is called the blood rot.

The common cow cattle, are considered quite good enough for the present herbage, though that would be very much improved by an enclosure, which is much wished for; the partition drains whereof, in the open field, would greatly facilitate the drainage, and in its consequences, would produce a very general and important benefit to the country. In this parish are forty houses, sixty distinct families, by computation, three hundred and thirty inhabitants; and the poor's rates are five shillings in the pound.

### *CROXTON.*

THE arable land in this parish lies in three open fields, which contain about one thousand acres; its soil is similar to the adjoining parish of Eltley, but lies much better for draining: it is also rented at six shillings and eight-pence per acre, and the management and produce nearly the same. The improved pastures in severalty, amount to about one hundred acres, and are rented at one pound; the remainder which lie in a rough, and neglected state, contain about three hundred acres, and are not valued at the utmost, at more than ten shillings per acre. About fourteen hundred sheep of the common breed are here kept, one thousand of which, were carried off by the rot in the course of the last year. To prevent so dreadful a calamity, and to improve the stock in general, and the husbandry of the parish, an inclosure is desired. Forty houses, forty-eight families, two hundred and forty souls; poor's rates three shillings in the pound.

*CAXTON.*

**CAXTON.**

**T**HE soil of the common field, lying east of the village; is a cold, brown earth, upon a reddish coloured clay, or brick earth; proper for the culture of wheat, barley, oats, peas, beans, and clover: of this there are about three hundred and thirty acres, rented at eight shillings the acre. The field south of the village, corresponds with the former, in description, extent, and quality. West of the village, are about eighty acres of enclosed, and open, half-yearly meadow land, which are rented at seven shillings and sixpence per acre. About fifty acres of enclosed pastures in severalty, which have been drained, and otherwise improved, are valued at thirty shillings per acre; the remainder, which amounts to about eighty acres, and which are also equally capable of the same improvement, are not valued at more than ten shillings per acre.

The largest farm is held at will, at the annual rent of one hundred and twenty pounds; which occasionally assisted with a small quantity of pigeons dung, produces in common with the rest of the parish,

20 bushels of Wheat	
28 ditto	Barley.
22 ditto	Oats
14 ditto	Peas and Beans per acre.

The common Cambridgeshire sheep are kept in this parish; the three year old wethers, when fattened to the bone, will weigh about fourteen pounds to the quarter, and taking the flock through, the average of the fleeces from off the ewes and wethers, will be about ten fleeces to the

to-day; the number to which this parish is stinted, are nine hundred and thirty-eight; six hundred of which perished in the course of last year by the rot. A very small and inferior breed of cow cattle are kept here, and which must still be continued, until the parish may be enclosed; from which improvement, great benefits are expected to be derived. The open field, meadow, and pasture lands, are much in need of hollow draining; by means of which they would be greatly improved. In this parish there are forty houses, fifty families, and two hundred and fifty persons. The poor's rates are half a crown in the pound.

### *GRANSDEN—Parva.*

NO information.

### *GAMLINGAY.*

THE soil of this parish, on the east of the village, and adjoining the meadows, is a loamy sand, proper for the culture of barley, turnips, rye, and clover; of this there are about sixty acres, which are rented at eight shillings per acre. The remainder of this field, amounting to about three hundred and forty acres, extending to, and binding upon Mr. QUINTIN'S wood, is a thin, cold, hungry clay, lying upon a gault, proper for the culture of wheat, beans, peas, clover, and black oats. South of the village, and also adjoining the meadows, there are about eighty acres of a deep, loamy, sandy nature; thence towards Potton wood, are about four hundred and seventy acres, of a similar cold, and clayey nature, with that before described. North of the village, and immediately adjoining thereto, the sandy land prevails

prevails, to the extent of about sixty acres; thence towards Warley, are about four hundred and ninety acres, of a cold, clayey soil. The meadow, or half-yearly land, is of a moory nature, contains about eighty acres, and is on an average, rented with the open field arable, at eight shillings the acre.

The largest farm is held at will, at the annual rent of one hundred and fifty pounds. The common husbandry, with turnips, or rye, on the sandy lands, in the place of a thorough summer fallow, assisted occasionally with hand-dressings, to the amount of forty shillings per acre, produces

16 bushels of Wheat	
24 ditto	Barley
22 ditto	Oats
12 ditto	Peas and Beans per acre.

There are about twelve hundred of the common Cambridgeshire sheep kept in this parish, three hundred and forty of which, perished in the course of last year, by the rot, and the mortality at this time still continues. This dreadful disease is here imputed to the bad state of the drainage, in the open fields, which in the event of their being enclosed, as is much desired, would be hollow drained, and improved to very great advantage; and until the herbage is made better by inclosure, no improvement can possibly be made in the stock and husbandry of this parish; which contains four hundred and five cottagers, in the whole, seven hundred souls. The poor's rates are three shillings, with an annual donation for the support of ten widows, out of the estate of the Earl of Macclesfield.

N. B. Chiefly college lands.

*LONG STOW.—BOURNE.*

**N**O information in either of these parishes.—The latter of which, seems to contain a large village, and a considerable quantity of rich pasture ground, worth from twenty to twenty-five shillings per acre. The arable land appears of a more gentle, and tractable nature, than in the neighbouring fields of Caxton, and Caldicot. The most interesting details in these parishes, are the calamities arising from the rot in the sheep, three fourths of which, are asserted by the shepherds, to have been carried off, by this dreadful disease, in the course of the last eighteen months, and those remaining of the old stock, are daily dying. The soil of Bourne, may be very well conceived, by attention to the description of the parish of

*KINGSTON.*

which consists chiefly of a tender clay, upon a brick earth ; lying in general with a good descent for draining ; is proper for the culture of wheat, barley, beans, peas, black oats, and clover. Some of the furlongs adjoining the village, in the direction towards Wood farm, produce a thick and spontaneous trefoil. In these furlongs there is a mixture of gravel, which if properly drained, might be very advantageously employed in the Scotch two-furrow turnip husbandry. The whole open field, contains about nine hundred acres of arable, and is rented at eight shillings per acre. Much hollow draining has been done at the Wood farm, by a very industrious and intelligent farmer : the drains of which, when made only eighteen inches deep, (without the assistance of the plough,)

plough,) cost for labour two-pence halfpenny per rod. The practice of paring and burning the old pasture grounds, has unfortunately obtained footing in this neighbourhood; the crops produced from this pernicious practice, were at first remarkably good, but are now evidently fallen off, and what the final result may be, is uncertain, though it is a practice, generally advocated, by those farmers, who are tenants at will. In this parish is found some very good woodland, in which the elm, ash, and oak, seem to flourish; the undergrowth is cut once in fourteen years.

The largest farm is occupied at will, at the annual rent of one hundred and ten pounds, and under the common mode of husbandry, aided by oil cake dust, and pigeons dung, produces, with the rest of the parishes,

17 bushels of	Wheat per acre
24 ditto	Barley
20 ditto	Oats
16 ditto	Peas and Beans

There are about four hundred and fifty of the common breed of sheep, kept here, amongst which, the rot has prevailed, but not to so alarming a degree, as at Bourne, and Long-stow; it is attributed to the bad drainage of the open fields, where the laying of the intermixed property together, is considered as a great and necessary improvement. In this parish, which contains twenty-four houses, thirty-two families, and one hundred and sixty inhabitants; the poor's rates amount to one shilling and nine-pence in the pound.

**GOLDICOT.**



*COLDICOT.*

**N**O information.—But the nature of the soil, may be pretty well understood, by reference to the foregoing parish, and the description of

*TOFT,*

Which was very obligingly communicated by letter from the Rev. — *TRANT* ; the substance of which is as follows : The surface of the soil, in this parish, is covered with a very thin bed of vegetable earth, immediately under which, lies a stiff, strong gault, with a few veins of gravel in different parts. The grains cultivated upon which, are wheat, barley, oats and peas ; the land will neither produce clover, nor turnips. The parish lies in three open fields, with a few enclosures in severalty, near the village. The common sheep and milch cows are preferred, and cannot be changed, it is thought, for the better. A little oil cake dust, and pigeons dung, are used with the common husbandry, in addition to the farm yard, stable dung and sheep folding. Hollow draining, with wood and straw, is found to be the most beneficial mode of improving the soil, in this neighbourhood ; but owing to the expence of it, amounting to twenty-eight shillings per acre, very few of the farmers can afford to practice it ; and those who have it more in their power, being tenants at will, and labouring under the influence of old habits and prejudices, are not fond of doing it, or of varying much, from the established mode of farming. In this parish, there are thirty-seven families, one hundred and seventy-three souls, and the poor's rates are one shilling and six-pence in the pound.

*HARDWICKE.*

*HARDWICKE.*

THE soil in general, may be described as a cold, close clay, lying upon a yellow, and white clay, and reddish brick earth; there are about ten acres of a dark, brown, strong mould, rising from blackish coloured clay, which are esteemed the most valuable part of the parish; the fields lie well for draining, but are at this time extremely wet, and constantly chilled, with too much water, though in a drained and improved state; would be proper for the culture of wheat, barley, oats, peas, beans, clover, and coleseed, for winter, and spring food; they contain about nine hundred acres, and are rented on an average, at five shillings and four-pence per acre. The enclosures in severalty, contain about seventy acres, and are rented at sixteen shillings per acre, though they afford in general, a very coarse and indifferent herbage from a soil, very similar to that of the open fields.

The largest farm is occupied at will, at the annual rent of seventy pounds. The common husbandry assisted with pigeon dung, oil cake dust, and dung brought from Cambridge, produces 16 bushels of Wheat per acre

18 ditto	Barley
18 ditto	Oats
8 ditto	Peas and Beans

A little hollow draining has been done, in the open field, where it would be continued on a larger scale, were the intermixed property laid together. Six hundred of the common breed of sheep are here kept, one third of which, perished lately, by the fatal disease of the rot, which still continues among

among them, and is ascribed to the wetness of the land. There are thirty houses, thirty-three families, and one hundred and sixty-five souls in this parish, where the poor's rates amounts to three shillings in the pound.

### *KNAPWELL (enclosed.)*

**N**O information, though much promised.—The soil is similar to that of Hardwicke. The whole parish was enclosed about fifteen years ago, and at this time, appears to be in a profitable state of cultivation. Farm houses and offices, have been judiciously erected; the crab, and hawthorn hedges have flourished, and now form not only beautiful, but effectual fences. From the facility of getting quit of the water, by means of the internal, and ring ditch fences, the least shadow of the sheep rot, has not made its appearance within these bounds, although the adjoining parishes, have all been greatly afflicted with this dreadful calamity, one only excepted, which is likewise enclosed, and from which, a fair estimate of the improvements in this parish, may be made, by a comparison with it and Hardwicke; being that of the parish of

### *CHILDERSLEY,*

The soil of which, is a brown, clayey earth, lying upon a white and blue clay, and reddish coloured brick earth, proper for the culture of wheat, barley, oats, peas, beans, and clover; of this there are about seven hundred acres of arable, and three hundred acres of pasture ground; which on an average, are rented at thirteen shillings per acre. The whole

whole of the pasture ground, from the natural chill of the sub-stratum, and the great length of time in which it has lain, in a closely compressed state, at present affords but a very coarse, sharp, sour, and indifferent herbage; every acre of which, by previously hollow draining, and opening with the plough, and then after a few crops properly taken, laying it down again with grass seeds, might be improved to the value of twenty-five shillings per acre. In the course of this year, about six hundred acres out of the thousand, which are comprehended within the bounds of this parish, will be completely hollow drained, at an expence of twenty shillings the acre. The high backs of the lands, are by means of proper ploughings, gradually lowering, and no difference is to be felt in walking over the fields, or to be seen in the last years stubble, or present growing crops, between the tops of the lands, and the furrows; a distinction which must strike the traveller with melancholy, as he traverses the open common fields, of this and some of the neighbouring counties. The whole of this parish is under lease for twenty-one years.

The common farm yard, and stable dung, mixed with considerable quantities of mould, which the industry of the farmer is still gathering from old banks, and the borders of the fields, under the following management: (viz.) First, fallow; second year, barley, with clover; third, wheat, dibbled in, or sown above furrow upon the clover lay, (with such other variety, as the good sense and experience of the farmer naturally dictates,) produces at present

24 bushels of	Wheat
36 ditto	Barley
36 ditto	Oats
20 ditto	Peas and Beans per acre.

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The fallow is frequently sown with cole seed, for the feeding of sheep in the winter, and succeeded in the spring with oats or barley. The small Highland scots for the coarse pastures, and straw yard, are found to answer very well; there are here some very good cows of the Leicester, and Derbyshire breeds; the Berkshire breed of sheep is most approved, of which there are about six hundred kept in this parish, and amongst which, not the least symptoms of the rot, or other disease, so as to be of an alarming nature, has yet appeared. There are no rates for the poor in this parish worth noticing, which contains only three houses, and thirty inhabitants.

### GIRTON.

THE land lying in the open field east of the village, is of a gravelly nature, and proper for the barley and turnip husbandry; on the west, and adjoining the enclosures in severalty, is a black, deep mould upon a gravel; thence westwardly, a reddish coloured loam, upon a tender clay, which ends in a strong clay, upon a gault.

The largest farm is held at will, at the annual rent of two hundred pounds per ann. which under the common husbandry, assisted by some hand dressings, and dung procured from Cambridge, produces

18 bushels of	Wheat per acre
10 ditto	Rye
22 ditto	Barley
20 ditto	Oats
16 ditto	Peas and Beans

The arable land amounts to about twelve hundred acres, and is rented with the pastures, which contain about two hundred acres, at twelve shillings per acre. There are four hundred

hundred sheep kept here, the right of walk, for which is rented at this time at one hundred and ten pounds. The sheepmaster has a privilege of folding his flock forty nights in the year on his own land; the remainder of the folding season, is divided amongst the rest of the parish. The expence of hurdles, and the shepherd, falls on the sheep-master, who has the privilege of mowing as much grass, from the baulks, and spots of meadow, in the open fields, as generally carry his flock through the winter.

### HOGGINTON.

THE only difference in the soil of this parish, and that of Girton, is that the land here is better treated; the arable land is rented at about eight shillings and six-pence, the pasture at twenty shillings the acre.

The largest farm is held under a college lease of years, at two hundred pound per ann. and pursuing the common husbandry without any aid from foreign manures, produces on an average of five years

16 bushels of	Wheat
24 ditto	Barley
18 ditto	Oats
20 ditto	Rye
16 ditto	Peas and Beans per acre.

Much of the open field land, is well calculated for the turnip husbandry, and great advantage would accrue from the cultivation of that crop, after an enclosure, which is greatly desired. The rot prevailed to an alarming extent amongst the sheep of this parish, (which are of the common Cambridgeshire sort) last year, but its fatal effects are at present

present much abated. The common home breeds seem to answer best. There are fifty-five families, and two hundred and sixty four souls.

### LONG STANTON.

**A**M much indebted to THOMAS HATTON, Esq. for the following observations, which were communicated to me, at my desire, by a very intelligent tenant of Lady HATTON.

East of the village is a deep, black mould, with gravel, proper for the turnip husbandry; south of it, adjoining the enclosures, a strong, brown, well stony soil, lying upon a clay, and proper for the culture of wheat, beans, barley, and clover; the whole contains about 100 acres, and is rented at nine shillings per acre. To the west of the village are several furlongs, which lie in, and near the village, and are well worth twenty shillings per acre: there are besides about one hundred and fifty acres of cow common, which are capable of great improvement by proper draining, &c. &c.

The largest farm is rented at one hundred and twenty pounds per ann. which produces with the rest of the

18 bushels of	Wheat per acre
24 ditto	Barley
24 ditto	Rye
16 ditto	Peas and Beans

As turnips and clover are found to answer extremely well, they would be generally cultivated, were the open land enclosed, and laid into severalty, in which case also, the heavy land in the parish, would be hollowed out

having answered a valuable purpose, where it has been tried. The common breed of sheep are kept in this parish, amongst which, the rot unhappily prevailed last year, to the loss of more than half their number ; this fatal calamity is here likewise attributed to the bad drainage of the heavy lands. Amongst the cow cattle, the home breeds are preferred, which in the spring of the year, are subject to stale blood, from their feeding upon the browse, or black and white thorn-bushes. The elm and oak timbers flourish extremely well here, and in the event of an enclosure, would be generally cultivated. The consolidated parishes of Long Stanton, contain forty houses, forty-eight distinct families, two hundred and forty inhabitants, and the poor's rates are two shillings and six-pence in the pound.

*FENNY-DRAYTON—SWASEY—OVER—  
WILLINGHAM—RUMPTON.*

**H**AVING began the survey at Girton, and taking these five villages in the way, before the objects of it were generally known in the county, I became here a suspected person, and could obtain no information whatever.

This district of country, contains a great portion of very good arable and rich pasture grounds, together with extensive and valuable commons. The large herds of cattle, which depasture on these commons, and the fodder, straw, and litter, which is produced and gathered from the fens, accumulate such prodigious quantities of manure, as to preserve the arable land in good heart, and condition, without the dung from the dove-cotes, which is generally sold to the  
farmers



farmers in the higher country. By conversing with several ploughman and labourers I met by the way, found the average produce to be

**24 bushels of Wheat**

**24 ditto      Barley**

22 ditto      Peas and Beans per acre.

The draining of the fens and low grounds, and enclosing the commons, and open fields, would render this district of country, inestimably valuable.

**COTTENHAM.**

**T**HE soil immediately adjoining the town, is a reddish coloured, deep, sandy loam, abounding with springs, and proper for the culture of wheat, peas, and barley : below this, and extending northwardly towards the fens, is a strong, well-stapled, black loamy mould, proper for the culture of wheat, peas, beans, and barley. The whole lies in five distinct open common fields, containing about fifteen hundred acres, which are rented at an average at about sixteen shillings per acre.

The enclosures in severalty contain                  acres,  
and are rented at about twenty-five shillings per acre. About  
eighteen hundred acres of common are divided into one  
hundred and seventy common rights, of seven cows, and  
fifteen sheep each. A part of these commons are generally  
depastured from the first of May until Candlemas; part is  
mown, producing very good upland hay; and the lower  
parts sen-fodder. The rent of the greatest occupier in this  
parish does not exceed one hundred pounds per ann. The  
rotation of crops is first fallow, with sheep-folding; second

year, wheat; the wheat stubble winter-fallowed and highly manured for the third year's crop of barley; fourth year, eas and beans; fifth year, barley; produce

28 bushels of	Wheat
30 ditto	Barley
20 ditto	Peas and Beans

No turnips, clover, tares, or other green crops are cultivated, though it is evident from the soil that they might be brought to very great perfection. About two thousand five hundred sheep of the common breed are kept in this parish, three fourths of which were unfortunately lost by the rot, in the course of the last season; the major part of the remaining old stock, have a disinal appearance, and are still dying with the disease.

The cheese so famous through England, by the name of this parish, is made here, and in the neighbouring villages; the superiority of which, is not to be ascribed to any particular mode in the management of the dairies, but solely to the nature of the herbage on the commons. The suckling of calves for the London market, is carried on here to great advantage; it commences at Michaelmas, and is continued to Lady Day. The common allowance is the milk of two cows to a calf, which is considered as the winter profit, and answers very well. There are one hundred and seventy-five houses, and as many families, by computation, the number of persons amount to eight hundred and seventy-five.

*WATER-BEACH with DENNY-AB*

OF which latter place, Mess. HEMINGTONS, sen. are from their free and candid communication, justly to my best acknowledgments.

On the west of this parish, and extending toward beach, is a well stapled gravelly soil, proper for the of rye, barley, turnips, and clover; on the side upon the River Cam, a deep, brown loam, without lying upon a clay, and proper for the culture of beans, barley, and clover: these contain acres, and are rented at sixteen shillings per acre. an equal quantity of enclosures in severality, are per acre. One thousand eight hundred and fifty-two and a quarter acres of commons, divided hundred and nineteen and a half common rights, and a half acres each, or eight cows and four hundred and twelve cows and eight sheep to each common right. five hundred acres of these commons, are at present the reach of the winter floods; the remainder, which is subject to be drowned, can in no way be improved, that evil be removed, and the commons laid into f

To assist in some degree the drainage of the adjacent common, the chillerin, and the north fen, which in severality, a sluice should be erected at Harrimire to issue the waters of the fen into the river Cam, when the level is drowned, or when the water, which is from the case, rises higher in the level, than in the level below. With regard to the scouring out of the b

old ouze, or west river, little advantage can be expected to result from that measure, except that, of a better supply of water, during the dry season of summer, to the adjoining country, as the waters descending by the present channel of the Cam, from a higher level, would on a certainty, (were the bed of the west river cleaned out) revert, or flow through it towards Hermitage. Had not the river Cam been diverted from its ancient and original course, from above Clay-hithe, leaving the hurds of Denny-Abbey upon the east, and voluntarily discharging its waters into the ouze, below Cottenham common, the present evils in the navigation below Clayhith, would not have existed, nor would the country, which is now a melancholy sacrifice to the diversion of that river, have been endangered.

The common husbandry of two crops and a fallow prevails in this parish, and after the spring crops are sown, the dung is removed from the yards to some convenient, intermediate spot, where after a time, if found necessary, it is turned over, and by the end of October, and after the stubbles are haulmed, twenty loads thereof (thirty-six bushels to the load) are carried upon the stubbles, and ploughed in by the following spring; the vegetable nourishment contained in this dung, combines completely with the soil, and abundantly feeds the crop of barley then growing upon the land. There are about one thousand sheep, superior to the common Cambridgehire; the three years old wethers of which, when fattened to the bone, will average about eighteen pounds per quarter. Some Yorkshire, and Irish steers are here grazed, the largest of which, however, are seldom finished without the assistance of oil cakes.

In preparing the rennet for the purpose of making cheese, which is here brought to very great perfection, nothing

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more

more is necessary than salting down the bags, in which state they remain for twelve months ; about six of these bags will make two gallons of brine, strong enough to suspend a new laid egg, which being put into a jar, is fit for use in about a month, when a gill of it to every four gallons of new milk, or warmed as from the cow is sufficient ; the milk should all be of the same age, or meal, and much depends upon breaking the curd with the hands ; for unless that is done very completely, the whey cannot be expressed ; any of which remaining in the cheese, communicates a harsh fiery taste, produces blue mould, and leaves the cheese full of holes, or cells, like a honey-comb. In short, the dairy-maid's attention should never be called off, or diverted from the very essential part of the process of breaking the curd.

There are eighty-six houses, one hundred and six families, five hundred and thirty souls. Baptisms for last seven years one hundred and thirty, burials sixty-three, increase of inhabitants sixty-seven.

### *LAND-BEACH.*

**T**HE soil south east of the village is a gravelly loam, proper for the culture of wheat, barley, oats, rye, peas, clover, and turnips. North-east, and extending towards the fens, is a strong well-stapled clay, lying upon a gault, and proper for the culture of wheat, beans, black oats, and clover ; of these there are about eight hundred acres, which are rented at twelve shillings per acre. The enclosures in severalty contain about one hundred and fifty acres, and are rented at twenty shillings per acre. The commons contain about one thousand acres, all of which, except about sixty acres, are

high and dry. The soil of the lower parts is a compound of strong earth and vegetable matter; of the higher parts, a loamy clay, lying upon a gault. The largest farm is held under a lease for fifteen years at one hundred and sixty pounds per ann. The common husbandry of two crops and a fallow is here the usual practice. An enclosure is greatly desired, under the encouragement of which, very considerable improvements in the stock and husbandry of this parish would immediately take place; in which there are forty houses, fifty families, and two hundred and fifty souls. The produce per acre is

26 bushels of Wheat	
28 ditto	Barley
18 ditto	Peas and Beans.

### MILTON.

TO SAMUEL KNIGHT, Esq. I feel myself much indebted for his polite attention, and the following observations, (viz.)

The arable land in this parish, consists of a rich brown mould, of a good staple, lying upon a gravel, and a strong deep loam, upon a clay, proper for the culture of wheat, barley, rye, turnips, peas, and clover: it contains about eleven hundred and twenty acres, and is rented at twelve shillings and six-pence per acre. The enclosed pastures in severalty, contain about two hundred acres, and are rented at twenty-one shillings per acre. There are besides about three hundred acres of improvable common, binding upon the River Cam; at present greatly injured by the occasional overflowings of that river, and the defective state of its banks.

The largest farm is under a lease of twenty-one years, rented at two hundred pound per ann. which produces the rest of the parish under the common husbandry,

20 bushels of	Wheat per acre
24 ditto	Barley
20 ditto	Oats
18 ditto	Peas and Beans

The common sheep are kept here, the breed of which would in the event of an enclosure, be greatly improved. The natural herbage is white clover, burnet, yellow nonpareil, and trefoil. The ash and elm flourish extremely well, but the culture under the present circumstances of the parish is much neglected. Oak also might be cultivated to advantage. There are forty-one houses, fifty-five families and about two hundred and fifty-six souls. The hamlet of Wootton, which comes nearly under the above description, contains five families, and twenty-eight inhabitants.

### IMPINGTON.

THE soil of the open fields, containing about one thousand acres, and which are rented at seven shillings and six pence per acre, is a deep, sandy loam, lying upon a gravel, which in a properly drained state, might be advantageously employed, in the culture of wheat, barley, rye, clover, and turnips; these fields lie extremely flat, near the sea, and subject to the soak of the fens, which rises thus when the fens are under water. The drainage however might be greatly helped, were the Huton people who have a great quantity of land, lying within the bounds of the parish, to co-operate in cleansing the principal drains.

are here, greatly grown up, and remain in a shamefully and neglected condition. About forty acres of common, which lie in a hollow, and receive the waters of the surrounding fields, have been formerly known to give the rot to the sheep. The enclosures in severalty, amount to about one hundred and thirty acres, and are rented at twenty shillings per acre. Were the property in the open fields, which now lies dispersed and intermixed in small parcels, laid together, a better drainage, and consequent improvements would ensue; at present, it is a matter of doubt, whether the present stock, is not too good for the present herbage, which of course must be very bad.

The largest farm is occupied under a lease for twenty years, at three hundred pounds per ann. which by the common mode of husbandry, in common with the rest of the parish, produces 18 bushels of Wheat per acre

20 ditto	Barley
20 ditto	Oats
16 ditto	Peas

There are twenty houses, twenty-three families, and one hundred and fifteen souls.

### CHESTERTON.

THE land north east of the village, is a gravelly loam, of a fair staple, lying upon a gravel, proper for the culture of wheat, barley, peas, rye, clover and turnips: on the west, is a strong cling clay, difficult to manage either wet or dry; is of a tolerable staple, upon a gault, proper for the culture of wheat, beans, black oats and clover. The whole lies in three open common fields, which contain about eighteen hundred



dred acres, rented at eleven shillings per acre. The  
 pastures in severalty contain                      acres, a  
 rented at twenty-two shillings and sixpence per acre.  
 one hundred acres of well-stapled good common land  
 would be highly improved by a general enclosure  
 parish, which is greatly desired. The largest farm is  
 pired under a lease for twenty-one years, at the annu  
 of four hundred pounds. The common husbandry,  
 with forty bushels of foot, the like quantity of pigco  
 at the same price, (viz. eight-pence per bushel first co  
 fourteen bushels of oil cake dust, at two shillings a  
 pence per bushel, per acre, produces

24 bushels of Wheat

28 ditto      Barley

26 ditto      Rye

20 ditto      Peas and Beans per a

There are one hundred and sixteen houses, one hund  
 twenty-five families, and six hundred and twenty-five  
 bitants.

### WICKIN.

**T**HE arable land consists of a deep brown mould,  
 dry bed of ragstone; of this there are about two hund  
 eighty acres, which are rented at sixteen shillings pe  
 The enclosed pastures contain about one hundred ar  
 acres, and are rented at twenty shillings per acre,  
 two hundred and twenty acres of enclosed arable la  
 pasture, skirting upon the fens, are rented at ten sh  
 per acre; a fen common, at present appropriated  
 digging of turf, and cutting sedge, rushes, &c. contain  
 one hundred acres. One hundred and fifty acres of L  
 L.

land, is annually mown for fodder, and when the fen is not drowned, is rented at five shillings per acre. High fen farm, contains about three hundred and fifty acres, which are rented at six shillings per acre; this has long been in a state of uncertain cultivation, from the frequent drownings of the fens. At Spiney Abbey there are forty acres of enclosed pastures, rented at twenty shillings; thirty acres of skirty land, at ten shillings, and one hundred and fifty acres of fen, at six shillings per acre.

The largest farm in this parish, is held under a lease for twenty-one years, at four hundred and forty pounds per ann. which with the rest of the parish, subject to a rotation of three crops, and a fallow, produces

24 bushels of Wheat per acre

28 ditto Barley

22 ditto Peas and Beans

Oats and coleseed are seldom cultivated. There are three engine mills occasionally employed in this parish, but are far unequal to its drainage; the river Cam is here the only outfalling drain, and should staunches be erected at Upware, the water must be held back, and in addition to the present calamitous condition of the country, the whole level, would be constantly under water. There are in this parish, eighty-seven houses, about one hundred and eight distinct families, and five hundred and forty souls.

### *SOHAM with BARRAWAY.*

**O**N the east of the town is found a black sandy moor, lying upon a gravel; on the west, a deep, rich, black mould, lying upon a blue clay or gault. The greater part of this land

land lies in pastures of the second quality, and containing two thousand five hundred acres, is rented at twenty-five shillings per acre. South of the village are about five hundred acres of the first-rate pastures, which are rented at thirty shillings per acre; thence, extending southwardly, are about nine hundred acres of open field arable land, consisting of a rich deep, black mould, lying upon a clunch, proper for the culture of every species of grain, pulse, grasses, and garden stuff, which are rented at twenty-one shilling per acre. North of the village there are about three thousand acres of rich pastures, rented at twenty-five shillings per acre; thence extending northwardly, is an open arable field, of a deep rich and loamy nature, lying upon a tough clay, or gault. This field contains about three hundred acres, and is proper for the culture of wheat, beans, and peas, and is rented at twenty-one shillings per acre. The lands skirting upon the fens, contain about one thousand acres, and are rented at fifteen shillings per acre. The fen amounts to about eight thousand acres, and in its present condition, is not valued at more than four shillings per acre. The bad state of this fen is not attributed to any want of internal works, or powers for lifting the water, but to the constant pressure and soakage of the Highland waters, through the loose and neglected banks of the rivers Cam and Lark. The most inferior fens, and low grounds, in this parish, effectually drained, and properly cultivated, would on a certainty be improved to the annual value of twenty or twenty-one shillings per acre.

There are here about two hundred acres of rich pasture ground, belonging to the poor, and affording the possessors of a common right, the pasturage of three cows or two horses, no one eligible to hold any of these rights, who possesses or occupies four pounds per ann. There are besides about

one hundred and fifty acres of horse common, depastured under a decree from the Court of Exchequer; both these tracts are richly worth, and are valued at twenty-five shillings per acre.

Soham-mere, which was formerly a lake, is now drained, and brought into a profitable state of cultivation. The soil is a mixture of vegetable matter and brown clay; it contains about fourteen hundred acres, and is rented on an average, at fourteen shillings per acre. No enclosure of the open field has been proposed, nor is wished for, though the laying of the intermixed property together is much desired.

The largest farm, which is under a lease of twenty-one years, does not exceed the annual rent of two hundred and fifty pounds. The rotation of crop, is first, fallow, with a thin coat of dung; second year, wheat; third, beans; fourth, wheat, and the fifth, wheat stubble is winter fallowed, and dunged for barley; another course is, fallow, wheat, barley, and the fourth year beans and peas; these with several other changes, but all taking three crops before a fallow, produce 26 bushels of Wheat per acre

24 ditto	Barley
32 ditto	Beans
20 ditto	Peas

The soil is kindly for the growth of ash and elm; a few straggling oaks appear very thriving; the hawthorn hedges grow remarkably strong and luxuriant. The population of the parish, and its appendages, is estimated at three thousand souls, and the poor's rates are one shilling and eight-pence in the pound.

*CITY [of] ELY.*

**T**HE town is bounded on the east by the fens, low grounds, and river Ouze.—Crossing the river, and extending thence about a mile eastwardly, the hamlets of Stuntney, Nornery, Thorney, and Quaney, rise from the level of the fens, and form an island, in which there is about an equal mixture of arable and pasture land of the first quality; and of a similar value with that hereafter described, lying west of the city. The skirty lands may be valued at about ten shillings, and the fens, which are two frequently inundated, at three shillings per acre. The town is bounded on the north, by very rich pasture lands, variable in their soil, and lying upon a gravel, clay, and gault; in this direction, we find the beautiful villa of New-Barns, and extending thence northwardly, the hamlet of Churcham. The pastures of the first quality, in this quarter, may contain about twelve hundred acres, and are rented at twenty-eight shillings per acre. The lands skirting upon the fens, may be appropriated as before, but the fens below, and bearing eastwardly are miserable indeed.

The arable land in this quarter, exclusive of many acres of very rich garden and nursery ground, is divided into two open fields, the soil of which, consists of a well mixed soft, sandy loam, lying upon a clay, and a strong tough cling clay, upon a gault. West of the city, and binding upon the enclosures, another open field, consisting of a sandy loam, upon a clay, and a tough clay, upon a gault; extending thence southwardly, are two more open fields, and some enclosures; the soil of which, consists partly of a wet,  
heavy

heavy clay, and a light dry gravel. The whole lies in five distinct shifts, and contain about twenty-one hundred acres; is applicable to the culture of a great variety of crops, and in its present state, is rented on an average of fifteen shillings per acre. South of the city, there are about seven hundred acres of enclosed pastures, of a variable nature and quality, but averaging with each other, the annual rent of twenty shillings per acre.

The fen contains about six thousand acres, including the skirty lands, which together are valued at three shillings per acre. To this may be added about five hundred acres of common, appropriated to the purpose of digging turf, and mowing sedge, and fen fodder. The farms are generally held at will, the largest of which, amounts to about five hundred pounds per ann. The course of crops, is first, fallow, with dung, and sheep-folding; second year, wheat; the wheat stubble is winter fallowed, with sheep-folding; for the third year, barley; fourth year, beans, and peas; then winter fallow again with dung, and sheep-folding; for the fifth year, barley; summer fallow in course for wheat, &c. this mode produces

22 bushels of	Wheat
24 ditto	Barley
20 ditto	Peas and Beans per acre.

It is to be remarked here, that the barley is of superior quality, weighing in general about fifty-six pounds to the the Winchester bushel; the wheat seldom exceeds sixty pounds. Were the property in the open fields laid together, a very considerable improvement would take place in hollow draining the stiff, heavy, wet lands; turnips and other green crops would be cultivated to advantage, upon the gravelly and light loamy soils. The deplorable state of the fens is attributed

buted to the want of a better outfal through the Haven of Lynn.

A great quantity of coarfe pottery is manufactured here, with the fame clay that is made ufe of in making the celebrated Ely white bricks. There are in this city  
houses,                      diftinct families, and  
fouls. The poor's rates are about four fhillings in the pound. There are not more than four hundred fheep of an inferior mixture kept in this diftrict; and the ftrength of the foil, and the excellence of the herbage, are a very fevere reproach to the refident farmers, for their prefent inferior breed of cow cattle.

### *LITTLE PORT with APSHALL.*

**E**AST of the village, and immediately adjoining it, are about fifty acres of ftrong, rich, deep, black land, proper for the culture of hemp and potatoes, which are readily rented at forty-five fhillings per acre. Thence extending fouth eaftwardly, are about one hundred acres of a warm, fandy loam, of a good ftaple, lying upon a clay and fand; weftwardly of the village, are three other fields, containing about one hundred acres each, the foil of which, confifts of a black and brown mould, of an irregular depth, lying upon a clay, and fand. The whole is proper for the culture of every fpecies of grain, pulfe, and green crops, and is rented at an average, at fourteen fhillings per acre.

The enclosed pastures of the beft quality, lie in and near the village; thefe contain about one hundred acres, and are rented at twenty-five fhillings per acre. The quantity of fen

fen in this parish, amounts to six thousand two hundred and thirty-five acres, which being rendered extremely precarious, from the very bad state of the drainage, under its present cultivation, is not rented at more than six shillings per acre, but were it improved to the full extent, would be amply worth double its present rent. The driest and best part of it, is appropriated to the culture of wheat, oats, turnips, cole seed, and bare cole, all of which, in a favourable season, are found to answer extremely well.

The hamlet of Apshall comes under the same description as Little Port, containing similar proportional parts of high grounds, and fens. The produce in the common open fields is

28 bushels of Wheat per acre

26 ditto Beans

32 ditto Barley

In the fens when they are not drowned, and that the crops hit, the produce per acre is

32 bushels of Wheat, weighing fifty-five pounds per bushel

42 ditto Oats, weighing thirty-two pounds per bushel

Cole seed, and other green crops, to the value of thirty-five shillings per acre. The fen wheat is thicker skinned, and of an inferior quality to the Highland wheat, but makes a good change as to seed in that country. There are about one thousand sheep kept in this parish, of the common breed, amongst which, I did not learn any particular disease prevailed. There are houses families in this parish, and the poor's rates are two shillings and three-pence in the pound.

Mr. Tattershall's fen farm, which is a part of burnt fen, binding west upon the present course of the river Ouze, contains about nine hundred and fifty acres, and is under the following management: first, It is pared and burned, which



which with all expences included, the cole seed, bare cole, or turnips, are sown for fifteen shillings per acre; these crops are fed off in the winter with sheep, followed by a crop of oats, or barley, the stubbles of which, are winter fallowed; sown again, with oats, or barley, and laid down with four bushels of good hay seeds, or clover, and rye grafs per acre; the latter, with four pounds of clean clover, and two bushels of clean rye grafs, is preferred. Under this course, one hundred and ten acres of this farm is annually broken up, and the same quantity laid down, with a design of having two hundred and twenty acres constantly under corn. The whole of this farm would readily let for ten shillings and six-pence per acre, the produce of which, is thirty bushels of wheat; barley, which is only fit for change of seed, or swines food, thirty-six bushels, and oats forty bushels per acre; the green crops are worth about thirty shillings per acre.

### *DOWNHAM.*

**O**N the east of the village, are about one hundred and twenty acres, which are rented at sixteen shillings per acre, of a heavy, strong loam, of a deep staple, lying upon a clay, proper for the culture of wheat, beans, barley, and clover. West of the village, are about two hundred acres, which are rented at fifteen shillings per acre, of a heavy, close, wet, cling, and tough clay, upon a gault; which in a properly drained state, is fit for wheat, beans, clover, and black oats. About ninety acres south of the village, and adjoining the enclosures, is a warm, deep, friable mould, upon a reddish coloured clay, or brick earth, proper for the culture of wheat, beans, peas, hemp, clover, barley, and turnips, and are rented at eighteen shillings per acre: thence extending  
southwardly,

southwardly, the warm, brown mould is lost, in a tough, hungry, thin, cold clay, upon a gault; of this there are about fifty acres, which are rented at fifteen shillings per acre; add to which, there is another field answering to the last description, and bearing about the south east from the village, containing about the same number of acres.

The enclosed pastures of the first quality, comprehend about four hundred and eighty acres, and are valued at twenty-five shillings per acre. The lands skirting upon the fens amount to about one thousand acres, and are valued at twelve shillings per acre on an average. The fen includes five thousand seven hundred and forty-four acres, two thousand acres of which, have been much injured by the cutting of turf, and are not valued at more than one shilling per acre. The remainder of it, is appropriated to the growth of fen fodder, except a small part under the common fen husbandry, which is estimated at six shillings per acre; and five hundred acres in a very uncertain state, from the frequent overflowings of the fen, lying north of the old Bedford river, and adjoining Manea, are rented at five shillings per acre. There are besides about one thousand acres, lying in the Hundred Foot Wash Way, which are rented at eight shillings per acre.

The largest farm here is occupied under a lease of sixteen years, at three hundred pounds per ann. the course of husbandry in the open fields, is three crops and a fallow, producing

24 bushels of	Wheat per acre
24 ditto	Barley.
20 ditto	Peas and Beans

The lands in the open fields, are much injured by the neglect of draining, which cannot be obviated until the intermixed property be laid together, an arrangement greatly desired by the most sensible and intelligent farmers. The  
miserable

miserable state of the fens, is imputed to the inattention of the commissioners, in not keeping the engine mills in proper repair, and the leading drains, and their outfall properly cleaned and scoured out. The practice of paring and burning the fen land, under proper restrictions and limitations, is the best mode of bringing such land into a proper state for cultivation. There are three hundred sheep, of the common breed, preserved by proper care in very good health in this parish, which contains one hundred and seventy families, eight hundred and fifty inhabitants, and the poor's rates are two shillings and three-pence in the pound.

### COVENY.

**N**O information. An island rising from the level of the fens, containing much rich pasture ground; the village is well peopled; the houses and other buildings in good repair, and for its more particular description, the reader may be very well referred to that of the preceding parish.

### WITHAM.

No information. Very similar to the foregoing.

### MAYPOLE.

**T**HE arable land in this parish lying in an open common field, south-east of the village, contains about one hundred acres, and is rented at nine shillings per acre; it consists of a strong, close clay, of a fair staple, lying upon a gault, and is proper for the culture of wheat, peas, beans, barley, and clover. There are about two hundred acres of highland  
pastures

pastures in severalty, rented at fifteen shillings per acre, and about forty acres of land lying in the wash between the Old and New Bedford Rivers, rented at ten shillings per acre. The Highland and Wash Common contains about one hundred and fifty acres, and a Fen Common, containing about one hundred and thirteen acres, had formerly by digging of turf, been much injured, but is now completely reclaimed, and under a fine crop of coleseed, the winter food of which has been eagerly purchased at forty-five shillings per acre. Previous to this fen being drained, and the turf bars levelled, it was not valued at more than one shilling per acre. The other fen common, is a mow fen, and depastured only from Lammas to Christmas. The fen land in severalty amounts to about six hundred and eighty acres, and is rented at ten shillings per acre.

The largest farm does not exceed one hundred pounds per ann. which with the rest of the parish, under a system of three crops and a fallow, produces

22 bushels of Wheat

26 ditto      Barley

16 ditto      Peas and Beans per acre.

An enclosure of the open fields and commons is much desired. There are in this parish fifty families, two hundred and fifty souls, and the poor's rates are two shillings and three-pence in the pound.

### SUTTON.

THE arable high land lies in four distinct open fields, north eastwardly of the village, the soil of which, is a brown earth, of a good staple, upon a reddish clay, or brick earth;

a tough, thin clay, upon a gault; and a small part of a mixed nature upon a gravel; the whole of these contain about seven hundred acres, which are rented at ten shillings and six-pence per acre, and their respective parts might be usefully employed in the culture of wheat, barley, beans, peas, clover, and turnips, upon two furrow work. The improved pastures lying in and near the village, contain about fifty acres, and are rented at twenty shillings per acre; those of the second quality, some of which are rough, and abounding with ant's-hills, contain about one hundred and fifty acres, and are rented at twelve shillings per acre. The lands skirting upon the fens, amount to about fifty acres, and are estimated at fourteen shillings per acre. The fen of the first quality amounts to about two thousand acres, rented at ten shillings; and there are about eleven hundred of the second, or inferior quality, which are rented at five shillings per acre. This fen drains partly into the old Ouze, and Hundred Foot rivers, and partly into the old Bedford river, the latter of which is best drained.

The largest farm is held at will, at the annual rent of two hundred and eighty pounds, and under the common husbandry of three crops and a fallow, produces

20 bushels of Wheat per acre

26 ditto Barley

16 ditto Peas and Beans

The fen management is much the same in this parish as at Little-port, the practice being to pare and burn for cole seed, which is fed off by sheep; then oats, or oats and barley, are sown for two years; the latter grain is unfit for malting, and only used for swines food, or change of seed in the Highland country. With the last crop of oats, or barley, are sown two bushel of rye grass, with ten pounds of red clover

clover per acre. The red clover is not generally approved of, from the encouragement it is supposed to give to the growth of turn-hoof, or ground ivy, as the roots of this species of ground ivy, are found to be destructive to horses.

The fen produce is 22 bushels of Wheat per acre

24 ditto Barley

40 ditto Oats

The laying of the intermixed property together in the open fields, is an arrangement greatly desired. This parish contains one hundred and forty houses, one hundred and sixty families, eight hundred souls, and the poor's rates are two shillings in the pound.

*HADDENHAM, with the Divisions of HADDEN-  
HAM-END, LINDON-END, HILL-ROW,  
and ALDRETH-END.*

THE soil of about five hundred acres, which are rented at nine shillings per acre, at Haddenham-end, near the village, is a cold, tough, thin clay, lying upon a gault, proper for the culture of wheat, beans, clover, and black oats; this division is under a routine of two crops and a fallow. Lindon-end is in four distinct open fields, the upper part of which, consists of a warm, sandy loam, upon a clay; but descending towards the fen, the sandy loam is gradually lost, in a cold, wet, thin clay, lying upon a gault; this division contains about four hundred acres, and is rented at ten shillings and six-pence per acre. The Hill-row division lies in four shifts, and consists of a firm, brown mould, well stapled, upon a gault, and reddish coloured

brick earth ; this contains about four hundred acres, and is rented at ten shillings per acre. The Aldreth-end corresponds in part with the adjoining lands, in the Hill-row and Lindon divisions, and may in like manner, be advantageously employed in the culture of various crops, including those of rye, clover, and turnips ; it contains about four hundred acres, which are rented at ten shillings and six-pence per acre. The improved pastures in the several divisions of this district, comprehend various soils, corresponding with those described in the open fields ; they amount together, to about two hundred acres, and are rented at eighteen shillings per acre. The inferior pastures, or those skirting upon the fen, contain about two hundred and eighty acres, and are rented at ten shillings per acre. The fen land amounts to about two thousand acres, and in its present state, is valued at seven shillings per acre.

The largest farm is held at will, at the annual rent of four hundred pound, the produce of which, averages with the rest of the parish 22 bushels of Wheat per acre

24 ditto	Barley
20 ditto	Peas and Beans

No inclosure is talked of, but the laying of the intermixed property together, in the open fields, is greatly desired, as thereby an opportunity would be afforded to drain, and relieve the open fields, which at present are greatly annoyed by too much water. It is supposed that the drainage of the fens might be considerably improved, by cleansing out the old Ouze, or west river, from Hermitage to its junction with the Cam. There are about one thousand sheep kept and preserved tolerably healthy in this parish, which contains two hundred distinct families, one thousand inhabitants, and the poor's rates amount to three shillings in the pound.

*WILBURTON.*

*WILBURTON.*

**E**AST of the village are about one hundred and fifty acres, which are rented at ten shillings per acre ; a gentle, warm, and sandy loam, of a good staple, and proper for the culture of wheat, barley, rye, clover, and turnips. North of the village, are one hundred and fifty acres of a strong, deep clay, lying upon a gault, and rented at ten shillings per acre. South of the village are two other fields, of nearly the same size and quality, and rented likewise at the same price. The improved pastures which lie in and near the village, contain about one hundred acres, and are rented at twenty shillings per acre. The fen at present, though at a very considerable expence, is tolerably well drained ; it contains about eleven hundred acres, and is rented at ten shillings per acre.

The largest farm is occupied under a lease of twenty years, at two hundred and fifty pounds per ann. The common rotation of three crops and a fallow, obtains through this parish, which produces, on an average of five years

26 bushels of Wheat

30 ditto      Barley

30 ditto      Peas and Beans per acre.

About nine hundred of the common sheep are kept here, the breed of which, has been much improved lately by a cross with Hertfordshire rams. The bulls of Derby and Leicestershire, and the horses of Nottinghamshire, are greatly preferred. Hogs of a large size have been fed here, up to five and a half hundred weight, or forty-four stones, at the age of twenty months. There are forty-two houses



in this parish, fifty distinct families, two hundred and fifty inhabitants, and the poor's rates are two shillings and sixpence in the pound.

*STRETHAM with THETFORD.*

**E**AST of the village are about one hundred acres of enclosed pastures, the soil of which, consists of a strong, deep, black mould, lying upon a gault, and rented at twenty shillings the acre. The village on the south is bounded by the fen. West and adjoining the town, are two open common fields, the soil of which, gradually resembles that of the pastures first described; they contain about four hundred acres, and are rented at ten shillings per acre. There are about fifty acres of enclosed pasture in the hamlet of Thetford, which are of the same quality and value with those first described. The skirty land, common included, amounts to about two hundred acres, and are rented at ten shillings per acre; and there are about six hundred acres of fen land valued at four shillings per acre.

The fen is of a remarkably good quality, very similar to that of Wilburton, but is reduced to a small value, from the present very defective state of the drainage. The open field land, is kept very well drained, by a wise regulation in this parish, of appointing field-reeves, who have the authority to order any drains to be opened that may require it, at the expence of those to whom such drains properly belong; such an arrangement at Eversden, would have saved Mr. Finch a most cruel mortification. Ash and elm flourish here extremely well, and were the intermixed property laid together, this timber would be very generally cultivated.

Under

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Under the present circumstances of this district, and from a rotation of three crops before a fallow, the general produce upon the Highland is

24 bushels of Wheat weighing sixty pounds per bushel  
28 ditto Barley weighing fifty-six pounds per bushel  
20 ditto Peas and Beans per acre.

There are one hundred and twenty-two houses, one hundred and fifty families, and seven hundred and fifty inhabitants in this parish, where the poor's rates amount to two shillings in the pound.

#### *WENTWORTH.*

NO information.

#### *WICKFORD.*

NO information, after several times calling.

#### *CHATTERIS.*

**T**HERE are about one hundred and fifty acres east of the village, which are rented at twenty shillings per acre; the soil a deep, brown, compact, clayey loam, lying upon a gault, proper for the culture of wheat, barley, beans, and clover. South of, and adjoining the town, is a common field, containing about two hundred acres, and rented at twenty shillings per acre, the soil of which, consists of a strong, brown clay, of a good staple, lying upon a red clay; the lower parts of this field are much injured by lying near the springs, but is nevertheless proper for the culture of wheat, beans, black oats, and clover. North-west of the village, the soil is of an open, warm, and gravelly nature,

lying upon a clay mixed with gravel, proper for the culture of wheat, barley, clover, and turnips ; of this there are one hundred and fifty acres, rented at sixteen shillings per acre.

The enclosed pastures partake of the same variety of soil with that of the open fields, they contain about two hundred acres, and are rented at twenty-five shillings per acre ; there are about three hundred acres of highland common, which in severalty would be richly worth the same rent as the enclosed pastures.

The fen-land common contains about three thousand five hundred acres, which in severalty would readily let for fifteen shillings per acre ; there are about one thousand five hundred acres of this last-mentioned common, now under cultivation by the authority of parliament, and the remainder, will, at the option of the proprietors of common rights, come in regular rotation for breaking up ; five hundred acres of this fen common are at present under tillage, and two hundred acres still under pasture, but subject to the regulations of the same act. There are about seven thousand acres of fen land in severalty, and under cultivation, valued, free of the draining tax, at ten shillings per acre.

From long experience, it has been found, that the fen land answers much the best, when it is properly laid down with the following grass seeds, mixed, (viz.) three pounds of red clover, three pounds of Dutch white clover, or honey suckling, three pounds of trefoil, or black nonsuch, three pounds of narrow leaved plantain, or ribbed grass, and one bushel of clean rye grass per acre ; two bushels of highland hay seeds, are generally preferred to the bushel of rye grass, when conveniently to be had. The produce in the fen in general, about forty-five bushels of oats, and the coleseed

for sheep feed valued at thirty-eight shillings per acre. On  
the highlands      26 bushels of Wheat per acre  
                         30 ditto      Barley  
                         24 ditto      Peas and Beans.

A provision was made in the act before mentioned, for cleansing and scouring the highland drains; in consequence of which, the open fields are very well drained; and under cover of the same authority, the fen lands and low grounds, are so well drained, as to render them, tolerably certain summer grounds. The population is estimated at one thousand eight hundred souls, but there are many double families in the same house; the poors rates are one shilling and six pence in the pound: there are about eight thousand sheep of the common breed, which by proper attention are preserved here, in tolerable good health: there are no sheep walks belonging to this parish: the cow cattle in general, are pretty good, and equal to the strength and herbage of the pastures.

### MANEA.

OMITTED through necessity.—It is a small island, rather less than Coveny; rising in like manner from the level of the fens.

### DODDINGTON and its Appendages.

NO information upon twice calling.

The village of Doddington, is surrounded with pasture, and some arable land, in open fields towards Merch. The soil in general is of a more light and gentle nature than that of Chatteris; an enclosure of part of the open field, seems

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to

to have been made formerly, and where the arable has been laid down, a very rich and tender herbage has been produced, covering the whole surface with a complete carpeting of white clover, burnet, narrow leaf plaitain fescue or dog's tail, and several other herbs and grasses, which indicate a rich and genial soil. The elevated parts of the several islands, rising out of the same level and annexed to this parish, may be considered under the same general description.

### *MERCH.*

NO information could be procured here, without paying for it.—Merch is a market town, an hamlet of Doddington; the river Nene passes through it, by means of which, a considerable trade is carried on; an enclosure has lately taken place; but as all information was withheld, it is impossible to state to the Board, what have been the effects of it.

### *ELM.*

**E**AST of the village, taking the church for the centre, the Highland may be described, a silty, tender loam, lying upon a loam, and proper for the culture of hemp, flax, wheat, oats, beans, clover, and turnips after flax; it contains about one thousand acres, and is rented at twenty shillings per acre. South-west and north of the village, is a clayey loam, mixed with a small portion of infinitely fine sea sand or silt, and vegetable matter, of a manageable nature, well stapled, and lying upon a clay, proper for the culture of hemp, flax, cole seed, wheat, oats, clover, cabbage, colewort, and carrots; of this there are about twenty-two hundred acres, which are also rented at twenty shillings per

acre. The fen land in this parish amounts to about seven thousand acres; the soil or surface of which, is composed of black, putrid, vegetable matter, lying upon a substratum at different depths of turf moor, and *beet's muck*, which finally rests upon a clay, the natural and ancient surface of the country; this fenland is proper for the culture of cole seed, oats, wheat, clover, and rye grass, and is rented at fifteen shillings the acre. The grasses cultivated for permanent pasture upon the Highland, (which through the whole of this level is a superinduction of the sea,) are twelve pounds Dutch white clover, and four bushels of the cleanest and best hay seed that can be procured. In the fen two and a half bushels of rye grass, and six pounds of red clover, per acre.

The sheep are generally of the Lincolnshire breed, though they are occasionally crossed with the Leicestershire; the three years old wethers of which, when fattened to the bone, will weigh upon an average about twenty-six pounds per quarter, and eleven pounds per fleece. The general proportion of stock allowed for the Highland pastures during six summer months, are twenty-two sheep, and one steer, or bullock for every five acres; and three sheep for every two acres, during the winter months; in which time they will improve in value, but in general not in grazing or growing fat.

The husbandry of the Highland arable is usually, first year, flax, or oats, the flax ground sown with turnips, or cole seed, and fed off with sheep; second year, oats; third year, wheat; fourth year, cole seed, beans, hemp, or oats.

The produce per acre as follows, (viz.)

Wheat 20 bushels of per acre

Oats 50 ditto

Cole Seed 18 ditto

Beans 16 ditto

Merchantable } 650 pounds  
Hemp }

Ditto Flax 700 ditto worth 6d. per pound,

is produced in a kindly season, from one well cultivated acre. The weeding this last crop is exceedingly expensive, often amounting to a guinea per acre. The fen husbandry is first, paring and burning, sowing with cole seed, and feeding off with sheep, if not overstocked; and the plants are strong; it sometimes afterwards stands for a crop, and then it is succeeded by wheat the third year, or (instead of oats, the second year, and wheat the third year,) oats, when it is laid down for three or six years, with the proportions of seeds before mentioned. The produce per acre

20 bushels of Cole Seed

20 ditto Wheat

52 ditto Oats

The drainage of the fens, is at present attended with very considerable expence, and still rendered very uncertain, from the obstructions in the Nene river, above Guyhirne, and the upper end of Kenderly's cut; the remedy for which, is pointed out in the section of this report, which treats on the internal works, and district drainage of the fens.

The largest farm is held under a lease, at seven hundred pounds per ann. though the rest of the farms in general are held at will; the poor's rates are four shillings in the pound; the population was not ascertained. The sheep in this

parish, have been subject to a very extraordinary disease, by feeding upon newly laid down land, which by the farmers, is considered to arise from their eating an herb, or grass, by them called cockspire (cocksfoot) which is said to produce a relaxation of the shoulder; this calamity is most to be apprehended, in moist forward seasons: the light long legged horned sheep of Norfolk and Suffolk, have been equally liable to it, with the heavy Lincoln and Leicestershire breeds, as are young neat cattle, from one to three years old; but since the removing of them to the high land on the first appearance of the disease, is found soon to effect a cure, a careful farmer will not allow his flock to remain more than a month, or six weeks, according to the moistness and forwardness of the season in the spring of the year, which by duly attending to, this evil is in a great degree prevented.

The following information was procured on repeating my visit at Doddington. This parish, with its dependancies, comprehends highland and fen country to the amount of thirty thousand acres. The soil of the Highland may be described in general, to be a gravelly loam, of a warm and kindly nature, lying upon a clay or gravel. The fen, a light moor, of various depths, and of the same structure with the level in general. The skirty land is rented at ten shillings, and the fen land at eight shilling per acre. The Highland pastures of the first quality at thirty shillings, the second at eighteen shillings, and the Highland arable at twenty-five shillings per acre.

The largest farm is occupied under a lease for twenty-one years, at the annual rent of five hundred pounds; there are some smaller farms under leases for seven years, but the  
tenants



tenants in general are at will. The course of husbandry in the open Highland field, first, fallow; second, wheat; third, beans, and fourth year, wheat again; the produce per acre was withheld. In the fen, the first year after paring and burning, it is sown with cole seed, which is fed off with sheep; the second and third years, sown with oats, the fourth barley-big, and wheat; the produce was here also withheld. After these four crops, the land is generally laid down, with clover, rye grass, and a few hay seeds.

The cross between the Lincoln and Leicestershire breeds of sheep is most approved, the three years old wethers, weighing on an average when fat, twenty-two pounds per quarter. The short horned Yorkshire bullocks are found to answer best, though they are seldom fattened to the bone without the aid of oil cake. The fen at a great expence is tolerably well drained; the draining tax amounting from two shillings to six shillings per acre annually. Population not ascertained.—The poor's rates one shilling and six-pence in the pound.

### *UPIWELL.*

**T**HE highland, consists of a strong silty loam, of a good staple, proper for the culture of wheat, hemp, flax, and potatoes, and permanent pastures; this amounts to about two thousand acres, and is rented at twenty-five shillings per acre. The soil, or surface of the fen, is a silt mixed with vegetable matter, or fen mould, lying upon a turf moor, under which, in many places, is found a bear's muck; though the soil, or super-stratum, is sometimes found upon

a clay, proper for the culture of wheat, barley-big, oats, coleseed, and were the fen in a proper drained state, it might be advantageously employed in the culture of artificial grasses ; it contains about fifteen thousand acres, which are valued at six shillings per acre ; but under a proper drainage, would readily rent at fourteen shillings per acre.

The largest farm is held at will, at a rent of three hundred pounds per ann. The practice of husbandry on the high-land, is first flax, second wheat, third hemp, fourth wheat, and the fifth year it is well dunged for flax again, and the same rotation of crops. The produce per acre

Flax	50 stone
Hemp	40 ditto
Wheat	40 bushels

In the fen, the practice is, first to pare and burn, after which, coleseed is sown, and fed off with sheep ; the second year oats, third wheat, and fourth year oats, or barley-big, when it is laid with rye grass and hayseeds ; when the coleseed is intended to stand for a crop, it is sown later than when it is proposed to be fed off. The produce per acre is

28 bushels of Wheat	
45 ditto	Oats
32 ditto	Barley-big

The wheat in general, weighs sixty-three pounds per bushel, but has a coarse thick skin, and runs much to bran in grinding. The weight of the barley-big is about forty-two pounds to the bushel.

The Lincolnshire breed of sheep, is most approved ; the wethers, when fattened to the bone, at three years old, will average about twenty-four pounds per quarter ; it is generally thought, that a cross with the Leicestershire, may improve

improve the carcase, and bring it sooner to market, but will not add to the value of the wool; the weight of the fleece is rather in favor of the two years old wethers, weighing about ten and a half pounds. The defective drainage of the fens, is imputed to the want of a better outfall, for the fen waters through the Haven of Lynn to the sea. This parish contains about four thousand inhabitants, and the poor's rates are one shilling and six-pence in the pound.

### OUTWELL.

**T**HE Highland in this parish, answers to the same description of that given of Upwell; it amounts to about seven hundred acres, and is rented at twenty-five shillings per acre. The nature of the fen land also is similar to the adjoining fens of the preceding parish; of this there are about six hundred acres, and in their present inundated condition, are not estimated higher than two shillings and six-pence per acre.

The largest farm does not exceed two hundred pounds per ann. which with the rest of the parish, is under the following routine of management; first year, flax; second wheat, which is sometimes omitted, for fear of the wire worm; third, hemp; fourth, wheat, and fifth year dunged for flax; produce per acre, Flax 40 stone

Hemp 40 ditto

Wheat 32 bushels

The hemp generally sells for four shillings per stone. The lands skirting upon the fens, which do not exceed sixty acres, are under the common fen husbandry, with the same

same produce as at Upwell. The deplorable state of this fen, is imputed to the cause assigned at Upwell; there are one hundred and fifty houses, one hundred and fifty-eight distinct families, seven hundred and ninety inhabitants in this parish, where the poor's rates are one shilling and three-pence in the pound.

### LEVERINGTON.

THE upland of this parish, is a deep, brown, under clay, or loam, lying upon a clay; the marshes are a loamy silt, of a gentle nature, and easily to be managed, lying upon a silt, or sea sand. The fen land is composed of vegetable matter, or loose black mould, upon a turf moor, resting upon a *bears muck*, and a clay. The upland is proper for the culture of wheat, beans, barley, clover, cole seed, and permanent pasture, and is rented at twenty-five shillings per acre. The marshes have been too long injudiciously employed in the cultivation of wheat and oats, and being now much exhausted of their original richness, are not valued at more than sixteen shillings per acre: clover and turnips have been tried with tolerable success upon these lands; but the produce will never be obtained from them, that they would have yielded, had they been suffered to have rested under pasture at an earlier day. The third description is employed under the common fen husbandry, and valued at twelve shillings per acre. The Highland arable is under much the same treatment as at Elm, with a difference only of sowing white mustard. Produce per acre

28 bushels of	Wheat
60 ditto	Oats
20 ditto	Beans
26 ditto	Cole Seed

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The weight of oats on this land, is thirty-five pounds to the bushel ; those grown on the fen will not weigh more than thirty pounds. The cole seed when fed off by sheep, is valued at two guineas per acre ; the other produce of the fen, is fifty-six bushels of oats, and twenty-four bushels of barley-big, weighing fifty pounds per bushel. There are one hundred and ten houses, one hundred and twenty-five families, six hundred and twenty-five souls, and the poor's rates are not ascertained.

### NEWTON.

THE inside or Highland agrees in general with the description of that in Leverington ; it contains about twelve hundred acres, and is rented, on an average, at twenty-two shillings per acre. The marshes also correspond with those in that parish ; they contain about five hundred and sixty acres, and are rented at fifteen shillings per acre. The fen amounts to about nine hundred acres, is rented at twelve shillings per acre, and agrees in description likewise with that in Leverington. About one-third of the Highland and marshes are under tillage, and about two-thirds of the fen.

The annual rent of the largest farm, is five hundred and fifty pounds per ann. The highland mode of treatment, is first and second year, oats ; then the land has a thorough fallow, and is well dunged for wheat, which is the third crop ; the wheat stubble is winter fallowed and prepared for fourth year's crop of cole seed ; this is fed off with sheep until Candlemas, and then left for a crop, or ploughed up

and sown with oats, and laid down with grafs seeds, produce

		In the Marthes.
56 bushels of Oats		36 bushels
24 ditto	Wheat	22 ditto
24 ditto	Cole Seed per acre	

under nearly the same practice of husbandry as on the Highland. The fen husbandry is to pare and burn for cole seed, and the two following crops, and then to lay down the land with rye grafs and clover, which produces

22 bushels of Cole Seed	
60 ditto	Oats
22 ditto	Wheat per acre

The fen in this parish is as well drained, as the present outfal will admit of. There are forty houses, forty-five families, and two hundred and twenty-five souls, and the poor's rates are one shilling and six-pence in the pound.

### *TID ST. GILES.*

**T**HE Highland lying around and near the village, may be described a strong loam, or clay, of a very good staple, lying upon a gault, and proper for the culture of wheat, oats, beans, and cole seed; contains about one thousand acres, and is rented on an average, at twenty shillings per acre. The soil in the marshes, is an hungry silt, with little or no variation, from the bed upon which it lies, proper in a less exhausted condition to permanent pasture, but has been too long improperly employed in the culture of wheat, barley, and oats; it contains about four hundred acres, and is rented at eight shillings per acre. The fen answering

the general description of such land, amounts to about two thousand acres, and is rented at ten shillings per acre.

The largest occupier rents about two hundred and fifty pounds per ann. and with the rest of the parishioners, pursues the following mode of husbandry; first, the land is half-fallowed, and dunged for cole seed, which is fed off with sheep, and fallowed the second year with oats, and the third, wheat; after this process is repeated, it is then laid down with red and white clover, and ribbed grafs, four pounds each, and one bushel of rye grafs per acre, and thus it remains in pasture for six years. The produce under this management is 24 bushels of Wheat per acre

56 ditto      Oats

The fen practice is to pare and burn, to sow cole seed, which is fed off with sheep, and succeeded by two crops of oats, and then laid for three years, with clover and rye grafs. Upon breaking up the skirty or fen lands, which lie near the clay, fallowing instead of paring and burning ought strongly to be recommended; produce in the fen, forty-eight bushels of oats per acre.

The Lincolnshire breed of sheep is generally preferred; the wethers when fattened at three years old, will average at twenty-four pounds the quarter, and the fleece will weigh about ten pounds. The cross between Lincoln and Leicestershire seems best adapted to the soil and herbage of this neighbourhood; in this cross, the carcase and staple of the wool is improved, though the quantity of the latter is evidently lessened. The black cattle for grazing, are generally brought from Lincolnshire and Yorkshire, which being unaccustomed to the pure and lively streams of Derbyshire or Scotland, answer much the best for the thick, and stagnant waters of this country.

It is much to be lamented that raising of live fences is so much neglected; the high and marsh lands, are well adapted to the cultivation of the hawthorn, and elm; this improvement would considerably add to the beauty of the country, afford shelter to the cattle, which are now fully exposed to all the severity of winter, and promote on the surface an earlier vegetation in the spring. There are seventy houses in this parish, one hundred distinct families, five hundred souls, and the poor's rates are one shilling and six-pence in the pound. In addition to the above information, procured on the survey of the three last parishes, the following observations are subjoined, which were communicated by letter from Mr. STONE, of Leverington, in answer to some queries sent him.

*Q. What is the nature of the soil and climate in your neighbourhood?*

*A.* As the term neighbourhood is equivocal, as to its extent, I will consider mine to be the three parishes north of Wisbech—"Leverington, Newton, and Tid St. Giles;" the last of which, is the northern extremity of Cambridgeshire, adjoining to Lincolnshire. These three parishes are upwards of ninety miles north of London; a situation which I suppose sufficiently points out the climate as to temperature. The soil is extremely various, each parish consisting of three districts or divisions of land; *the marshes, the high lands, and the fens.* The river Nene runs nearly due north from Wisbech, on the west side of which, an embankment was made in these parishes from the sea, about one hundred and eighty, or one hundred and ninety years ago, and lies parallel with it, at the average width of about a mile, bounded on the west by the old Roman bank. This portion of land is called *the marshes*, and consists throughout of a light soil,  
composed



composed of a mixture of sand, with clay; the former generally prevailing, and is called by the local term of silt. These marshes are in some places enclosed, in others open, and intermixed in the small lots in which they were originally apportioned, and might receive vast improvements by being laid in severalty. It is clear at the time these marshes were divided, that the principle of the division, was by quantity and not by quality, as the lots, as they were called, are in one parish, two acres, in another, two acres and one rood, and in the third, eight and a half acres; so that the number of rights, and the quantity of land were considered, and to each right the same sized parcel was given. It is evident there was no mode of equalizing the allotments, but by saving the single rights out of the middle quality, and giving to those persons who had more rights than one, as many separate allotments, each laid in a different quality of the land; and hence it is, that if an owner had five or any given number of rights, he had as many allotments scattered over the whole waste. This made a separation by fencing impracticable, but at an expence equal to the value of the land; the soil cut up for the grips, and the materials for the dry fencing set between them considered. The great objects of enclosing at the present era, contiguity and distinctness of property, might possibly be known, but certainly had not reached this neighbourhood at the period above mentioned. Where the enclosed pieces in this tract, are larger than the lots described, they have been made so by purchasing the lands adjoining, till a quantity worth fencing off was obtained.

A small part of the parish of West Walton, in Norfolk, extends into these marshes, and is principally intermixed and open. The enclosed parts of them, all consist of both pasture and arable land; the pasture is used for young stock,  
principally

principally sheep; as the water in general is bad, the being saline, and there being no possibility of taking in fresh water. The herbage is very healthy, and for young sheep, answers very well; but none of it sufficiently good to fat sheep upon, unless improved by clay or lime; the difficulty and expence of obtaining which, are likely to prevent the experiment from being made. The arable parts of the enclosed marshes have generally two crops of corn taken from off them, are then fallowed for turnips, or cole seed, which when fed off with sheep, the common practice, enable the land to produce two crops of corn more; the first is generally oats, the second wheat, and when the land tires of this round, and becomes foul of weeds, it is seeded down with red clover, and rye grass, (fourteen pound per acre of the first, and a peck an acre of the last) is allowed to lie two years, and is then taken up again: if clear of twitch, is sown with oats, if not, is fallowed from the sward for cole seed, or turnips. By this routine the enclosed part of the marshes, is occupied to great advantage; whereas the open and termixed parts are in a most wretched state; two crops and a fallow are perpetually taken; the last crop is seldom good for any thing; the land is over run with weeds; it wants resting in pasture, and enriching and compressing by sheep, eating that pasture, which its open state must forever forbid. If these lands (the open lands) were laid in severalty, and enclosed, they would in general bear a double rent, and the occupiers be better off than at present.

The next portion of these parishes to be considered, is the "high lands," and these lie west of the marshes, between the Roman bank on the east, and the fens on the west. The soil of the high lands, resembles that of the marshes, with a larger proportion of clay, and less sand in them; so that

that it may be said, they are, generally speaking, of a heavier soil, increasing in their value as they increase in this particular. Of these by much the largest quantity is in pasture, and could these parishes be supplied with fresh water, it is to be presumed, but few of the high lands would be ploughed; but the want of this essential in grazing, is an apology for so large a part, as there is at present, being arable. The management of the high lands that are ploughed, is settled into no system, except that of growing as many crops of corn, in succession from them, as they will produce.

The largest part of these parishes is occupied by the owners, who have become within these few years, the purchasers of the lands they occupy; and notwithstanding this, there is scarcely an instance of a piece of good high pasture land being ploughed, that is not lowered in the value of its fee simple, five years purchase. A regular and rational system of agriculture may be recommended, and partially adopted in such a country, but cannot be made general or enforced.

In Tid St. Giles there is some of the best sheep pasture in the kingdom; the soil is that due mixture, the density and solidity of which, are sufficient to hold the manure arising in vast abundance from the crops of the fen land, whither none ever returns; capable too of resisting the frost, and yet not so strong a clay as to retain the wet, or to burn in a drought extremely; that it is on the best of these lands, an unfading verdure is always to be seen. They would be equally good for oxen, could good fresh water be obtained; of which there is no supply but by rain; and this in a summer like the last, proves very insufficient. The want of water in all these parishes is a great hardship. In the parish

of Leverington it might be remedied, as to the highlands; and if the present Honourable Board attend so minutely to the interests of agriculture as to regard partial and local evils, I pledge myself to shew not only the possibility, but the facility, of remedying it. I have frequently suggested it to the principals of the parish; but the want of unanimity and joint effort among them, to promote the general good, have left this, as well as many other material matters, disregarded. An alteration of the ancient practice of commoning, or depasturing stock, on the wastes of the parish of Leverington, has been introduced within these few years, and is continued to the prejudice of the poor cottagers, who are thereby deprived of keeping cows for the succour of their families. If the former custom could be restored, a great benefit to the parish would arise from it. I believe the labourers families would be much more comfortable from the article of milk, as well as more healthy, and our population, which is often greatly reduced by the unhealthiness of the climate, being good or bad, as the stagnant waters of our country are made fresh by rain, or putrid by long draught, would be increased; the excessive use of tea among these people would be abated, and of course themselves and children would be more vigorous and healthy. This alteration crept in about eight years ago, on the death of a gentleman, whose probity and activity, rendered him as much as an individual could be, the regulator of the parish, and his humanity, the guardian of the poor's interests in it. It was frequently attempted in his time, but his opposition prevented its taking effect.

The *fens* lying on the west side of these three parishes, and remaining nearly parallel with the high lands, as the high lands do with the marshes, and the marshes with the river Nene, form the whole of them. The soil of these

Y . . . . . (their

(their skirts excepted, which are like the high lands) is a moor, or black soil. The larger part of them has not been drained more than twelve or fourteen years; the outfall of this part is through the high lands and marshes into the river, or rather a continuation of the river just mentioned, by means of water mills that go by wind. It was this continuation of the river Nene in a confined, and which when confined, soon became a deep channel, that rendered the drainage of these fens, and indeed a great part of the high lands in these parishes, practicable. For before this a vast expanse of sands or bay, laid in front of the outfall, through which the waters of the Nene used to serpentine in shallow and shifting channels, or rather streamlets, on which it was impossible to navigate but in high tides, or great freshes, and into which it was impossible to drain the adjoining lands. The surface of the bay or sands being so many feet above that of the lands, no interior banks could have been raised sufficiently high, nor no mechanical powers invented to force the waters between them, so as to have rendered the drainage as effectual as it now is, without any increase of banks, or mechanic force, more than is necessary to throw the waters through the high lands and marshes as before mentioned. The leading of the river Nene in a confined channel through part of this bay nearer to a deep water, was part of the great plan known by all who ever attended to the interests of this vast tract of level country, to an immense part of which, besides the parishes under consideration, this partial execution of this plan, has proved a work of salvation: It has served to establish a position before much controverted, "that a deep and confined channel, ending in an expanse of deep waters, is the only method of uniting the interests of navigation and drainage."

These fens were recovered at an immense expence at first; those of Tidd and Newton, having borrowed upon them  
near

near ten thousand pounds, contain between three and four thousand acres, and pay an annual tax of four shillings per acre, for the interest of the sum borrowed, and the support of the works of drainage. And here the eye of justice cannot help glancing at a circumstance so very repugnant to her, that as soon as these fens were recovered and rendered productive, they were immediately subject to, and did render a tenth of their produce in corn, or a composition equal to, and often exceeding it, though the rectors deriving this immense advantage, were no contributors to the expence incurred.

In stating this, I am aware it is only a common evil, but its universality does not lessen it, nor has even one plea from the most ingenious advocate for tythes, ever reached this neighbourhood, in justification, or even palliation, of this suffering. We are told of *communi jure*, but this overturns the cause it is meant to support. It is a fact that the parts of these fens producing corn, have yielded more to the tythes for the first seven years, than to the owners who let their lands to be occupied, and the proportion of such lands for that term was more than two thirds of the whole. The hazard and disrepute of fens when first drained, that have been long drowned, as these were, even kept the rents low for a time, and before the owner can let his lands for their value, they must be established in good credit, both as to soil and security in drainage. The culture of these lands, consisting of moor or black soil, is that of paring and burning, sowing with cole seed, feeding off with sheep, taking two crops of corn, the first, oats, the second, wheat, laying down with the last, continuing pasture two years, and then repeating the same course.

*Q. What manures are made use of, and whether particular attention is paid to the making of dungbills?*

*A.* Pigeon dung and foot are sometimes sown upon marsh and high land fallows, whereon turnips or cole seed are sown; and sometimes foot upon wheat at spring, to embitter the surface and upper stratum of the land, to make the wire worms eating the wheat, retreat from it, and where this has been used it has always succeeded; there having been a vast yield after it, when, if it had not been tried, it has been believed the crop would have been entirely destroyed: twenty bushels an acre, is the quantity generally used. Wire worms are the greatest annoyance we experience in our husbandry; they are yellow in their colour, and resemble the centipede, from the number of their feet, but not quite so long in their bodies; the heavy and light soils are equally subject to them.

No particular attention is paid to the making of dung-hills, nor do I see that our country furnishes any thing likely to give rise to the practice. To clay our light silty lands would be the first, and greatest improvement, and this, I fear, must be ever retarded by the badness of the roads, and the dearth and scarcity of labourers: the manure in our straw yards we are very careful of, and think it much improved by taking our beasts upon it with linseed cakes.

*Q. What are the usual sorts of ploughs, carts, and other implements of husbandry?*

*A.* These are certainly best described by drawings of them; the levelness of our country may be supposed to make only the most simple necessary. The common cart with  
Ghasts,

shafts, waggons with poles, drawn by horses abreast, though shaft waggons are becoming more general; ploughs with one hale, or single handed, varying in their size as the soil renders necessary, and these are distinguished by whole Dutch three-quarter, and half Dutch ploughs; very few implements of experimental husbandry have been introduced; the drill machine has been a little used; a piece of wheat was sown with it last year in this parish; every other land was drilled, and the intervening ones sown broadcast; the latter appeared to have the preference at harvest; the experiment was made on land where nothing was to be feared but too luxuriant a crop, and had the summer been as wet as it was dry, the whole would certainly have been laid; there must have been abundance of straw, and the corn as in the year 1792, on similar lands, very thin and bad: when I say the broadcast was the best crop, I mean the straw was the brightest, and the freest from leaf, and did not seem so high as the straw on the drilled lands. Every farmer will therefore conclude, the grain was the best, and that there was the most of it. Indeed one would suppose, this experiment was made with a view to shew the drill husbandry to disadvantage; for if I understand its intention, it is of most use on exhausted ploughed lands, where fresh rigour is required to be given to the crop by a fresh moulding, and on such land I have no doubt it would have had the preference.

*Q. What is the size and nature of the inclosures?*

*A.* By inclosures I understand the wastes, for which acts of parliament have been obtained for authority to inclose and divide them. These in this country have consisted of interior commons and wastes of the different parishes, whereon right of commoning was vested in the inhabitants of the ancient messuages,



messuages, &c. also of salt marshes, whereon the like right has been exercised. Three enclosures within ten miles of us, Sutton, Gedney, and Tidd St. Mary's, of the former description have taken place, in the course of the last four, or five years; the first, of about thirty-three hundred acres; the second, about one thousand acres; and the last, about six hundred acres; and two of the latter description, much nearer us. Walpole and Terrington salt marshes; the first, consisting of about sixteen hundred acres, and the last, about one thousand acres. To furnish an idea of the quality of these lands, I will state what I suppose the average rent of them;

Of Sutton, not less than 30s. per acre	} These were the interior commons and waste lands of these parishes.
Of Gedney, about 20s. per acre	
Of Tidd St. Mary's, not less than 30s. per acre	

Of Walpole and Terrington, about	} 25s. per acre.	} The salt marshes of these parishes.

N. B. In these values, the extra rents of lands let for woad and flax, are not considered, but of the lands only let for the common purposes of occupation.

The hazardous situation of the salt marshes, can alone account for the rent of them being inferior to that of interior commons and waters, as their quality for growing corn is much superior: both these salt marshes, produce the best and biggest crops I ever saw; no part of the crops upon them was destroyed by wire worms, or any other reptile, and their having been so continually and immediately overflowed by salt water, previous to being embanked, may be considered the cause of this. The crops on the interior common and washes, suffered extremely by these at first, and still continue to suffer every year, in a greater or less degree.

*Q. Whether*

*Q. Whether inclosures have increased or decreased population?*

*A.* Inclosures appear to increase population; in those made above, cottages are built, which are filled with families: a great proof of their effect in this way is, that the labour in those parishes is double what it was, and it is done with more ease than before. The additional employment seems to attract more than additional assistance, some part of which, becomes stationary, and thus the population is increased.

*Q. What is the rate of wages and price of labour, by the day or the piece, and what are the hours at which labour commences and ceases at the different seasons?*

*A.* From Martinmas to Lady-day, fifteen-pence per day—from Lady-day to Midsummer, eighteen-pence per day—from Midsummer to beginning of corn harvest, two shillings and two shillings and six-pence per day—during harvest, from three shillings to five shillings per day, and sometimes six, seven, eight and nine shillings per day—from the end of harvest to Martinmas, eighteen-pence per day. The hours from Martinmas to Lady-day, from seven to five—from Lady-day to Martinmas, from six to six.

*N. B.* The want of more hours of work in the summer months, greatly retards the business of the country, and occasions great dissoluteness among the labourers: the day that is not ended in labour, generally is in drunkenness.

By the piece—mowing of grass, from two shillings to two shillings and six-pence per acre—reaping, from seven to fourteen shillings per acre—threshing, oats from five to six shillings

shillings per last, (or twenty-one coom Winchester) wheat  
 one shilling per coom Winchester, and barley eight-pence  
 and nine-pence per coom. The labour in those parishes is  
 very ill done. There are very few resident labourers that is  
 to say, householders, now in them. These were taken off  
 in the late sickly autumns, and the number of labourer's  
 widows, and families relieved by these parishes, is an incon-  
 testible proof of this. Our labourers are generally awkward  
 and unskilled in the processes of agriculture, such as ploughing,  
 sowing, reaping, mowing, stacking, &c. and this happens  
 from having few but the outcasts of other countries among  
 us. That they are immoral and unmanageable in a greater  
 degree than in upland countries, is also certain. The ex-  
 traordinary number of alehouses conduces to these evils, and  
 since the spirit of revolt from order and duty, so much incul-  
 cated by certain publications, has prevailed, the difficulty of  
 conducting the business of this country, has become fatiguing  
 and dispiriting in the extreme. The expence keeps pace  
 with the difficulty, and in proportion as the wages are high,  
 the conduct of the labourers is insolent and unfaithful. This  
 unseemliness of manners, grew to its present height in the  
 unhappy summer of 1792, when all the subordinate ranks  
 were ready to invert the settled system of the community,  
 and reduce the order of things to chaos and confusion. How  
 long this dæmon will continue its baneful influence, and  
 whether it will at last prevail, the event of the present con-  
 flict between vice, irreligion, anarchy, and bloodshed, on the  
 one part, and virtue, religion, morality, and good govern-  
 ment, on the other, only can determine. It was in this un-  
 fortunate summer that the carpenters, the bricklayers, black-  
 smiths, &c. combined, and advanced their wages and work  
 in this country; this was very unnecessarily done, and it  
 would be a right step, was every parish to hold a vestry  
 meeting, and enter into resolutions to return with these  
 people

people to their former terms: It was no necessity, but a spirit of exaction that dictated it.

*Q. Whether proper attention is paid to the draining of land, particularly the fenny part of it, and what sorts of drains are commonly made use of?*

*A.* There is no land but what is drained in these three parishes; a field in Leverington, of about two hundred acres, only excepted, called Gorefield; if the owners of this were to solicit the Court of Sewers, to admit them to the common drainage of the parish, there is little doubt but they would be admitted on terms proportioned to the relief given; this I suppose the commoners have power to do. The residue of these parishes are drained by water engines that go by wind, the marshes excepted, which drain naturally. The drains are from twelve to sixteen feet wide at top, cut as deep towards the outfall (through the marshes) as the quickness of the soil will allow, the sides so sloped as to make the bottom about half the width of the top. On the depth of these drains towards the outfall, depends their depth as far inland as the first mill to which a level bottom is necessary, and so from the first to the second mill, &c.

*Q. Whether paring and burning is practised, and how it is managed and found to answer?*

*A.* On the fen lands this is general. The toughness of the fen sward is such, that it will not fall to decay, nor be got in pieces unless burnt. Cole seed on fen land will not feed sheep, unless the land producing it is burnt to prepare it for the coleseed. An excess of this practice often consumes a great deal of the soil, and when the land is laid

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down

down, a barrenness where this has taken place is very apparent. Goose-grass (or clivers) is the general symptom of this impoverishment. Breast ploughing is certainly the best method, it may be done thinner, and more uniformly than by the plough drawn by horses, though the latter is the practice of this country. And indeed I do not think the damage done by burning, arises from the burning of the sward, or the quantity pared off, so that it exceeds not one inch and a half or two inches, but from the fire getting hold of the land from allowing the heaps to lie unspread too long, and not watching the fire carefully, and putting it out immediately after spreading, before it gets such hold of the land as to make it difficult to be extinguished; the fire then bites, as it is called, and this is very prejudicial.

*Q. What is the price of provisions, and whether the price is likely to be steady, to rise or to fall?*

*A.* Beef from one to five shillings per stone, (fourteen pounds to the stone) varying according to the more plentifully or scarce seasons of the year. Mutton from four-pence to five-pence per lb. varying in like manner. Pork generally high, seldom less than four-pence per pound; this owing to the small quantity of grain proper for pig-feed grown hereabouts. None of our soils suit peas, and barley-big is generally used for this purpose, of which but little is grown. Wheat generally below the average of the kingdom. These form the state of Wisbeach market. I see no probability of a fluctuation in these articles of provision. Our population altering but very little, there being no manufactures in this country; the prosperity or depression of trade affect us not as to home consumption. Potatoes are grown in great plenty, and contribute greatly to the sustenance of the poor.

*Q. What*

*Q. What is the state of the roads, both public and parochial, whether they are in good order, and whether any improvements in regard to making roads have been discovered?*

*A.* By public roads, as distinguished from parochial, I suppose are meant turnpikes; these are made of the best silt that can be got, which when pulverized, is nearly all sand. Our parochial roads, where silt can be got, are made in like manner. We carry this some miles for this purpose; but the inner roads of these parishes are and ever must be, bad in winter.

*Q. What is the state of farm houses and offices, whether in general they are well situated, and properly constructed?*

*A.* The farm houses in this country are generally esteemed good. The farm yards and offices ill constructed, and from the high price of materials and workmanship, these will probably continue so. Situation for convenience of occupation is little thought of, the property being so dispersed; there are but few farms that have much land contiguous to the houses.

*Q. What is the nature of the leases commonly granted, and what are found to be the most advantageous covenants between the landlord and tenant?*

*A.* From this state of the neighbourhood described in the general observations I have attempted, there are of course

but few leases; but it has been found, when leases have been granted, or agreements for farms made, that the covenants and conditions the best calculated to preserve the fee simple of the land letten undiminished, are the following: To restrain the sowing of hemp, flax, woad, madder, and mustard-seed; and though the police gives rewards for growing the two first, yet it is the interest of the owner of the land, to inflict penalties on the sowing them, as no manure arises from them. The restraining cole seed from standing for a crop, is founded on the like objection. Where the first five of these are grown, the land ought to be expressly let for the purpose, and an extra rent set upon it; because it must necessarily be the worse for what it produces, which is never the case with a farm properly let, and skilfully managed. Every farm should render the occupier a handsome interest for his capital employed upon it, in stock, crop, and labour, and improve in its condition. And here is seen the difference between a good and bad tenant, which needs no illustration, either to condemn the one, or render the other approved in the eyes of his landlord; the former will always improve the land he occupies, and his own property together; the latter generally reduces both. The general covenants of use for any farm in this neighbourhood, besides the foregoing, are to forbid the ploughing of the high lands in general, if water can be got to render them fit for grazing. Of the portion of fen land belonging to any farm, not more than one-third of the land permitted to be ploughed, should be in corn in every year, and the same as to the marshes, and from neither more than two successive crops should be taken. To restrain the laying manure on the ploughed lands is very expedient. I have seen instances where leases have been silent as to directing the routine of the crops, and the lands on which the manure should be laid, of bad tenants manuring the ploughed lands, and cropping them without intermission

intermission during the terms of their leases. By this abuse the ploughed land, at the expiration, was extremely foul, and wanted fallowing and laying down, and the grass land not improved as it would have been with proper manuring. Fewer crops of corn and timely fallowing are therefore insured by forbidding the ploughed lands to be manured. Moreover the best species of pasture in every grazing farm, ought to be restrained from being mowed.

*Q. Whether the people seem to have a turn for improvement, and how such a spirit can be best excited?*

*A.* In grazing considerable emulation exists; in farming very little; the cause of this perhaps is owing to the labour, so scarce and high in this country, necessary to the one more than the other. Labour must be on a better footing before any spirit of excellence in farming can be roused.

*Q. What improvements can be suggested either in regard to the stock, or the husbandry of the country?*

*A.* Before the husbandry of the country can be improved, labour must be had on better terms; this accomplished, no doubt but some experiments would follow; for instance, I have no doubt but we could grow very excellent wheat on our seeds of two years lay, taken up in October, and dibble upon them in the Norfolk method; but such an attempt would frighten all our poor women and children; each would want a manager, and before works of this sort can be introduced, a great change among these people must take place; perhaps the introduction of the work would best effect this, but we  
have



have nobody enterprizing enough to attempt it ; some pieces have been done near us, but by strangers.

This question as to stock, opens a very spacious field, and as much difference of opinion has arisen on it, and been agitated with much virulence, every one is careful how he engages in it. I think the arcana of animal nature are so far discovered, as to have established principles by which that sort of stock is ascertainable, that changes a given quantity of vegetable food into more animal weight than any other sort, and that animal that pays most for what it eats, seems to me to be preferable. I know this doctrine is resisted by those who are so prejudiced as to be reconciled to give food to stock, without improving them. The backwardness of the *science of cattle* cannot perhaps be better demonstrated, than by observing there is no *name* for it. Farming and grazing are talked of, as the distinct branches of rural business; but agriculture, compounded as it certainly is of *agri cultura*, must be considered descriptive of, and applicable to, the former only. And by grazing can be only meant that process by which the stock is fattened; and here I have reason to believe, “the eye of the master maketh the ox fat.” But the art of breeding and chusing such as will fatten quickest, and to the greatest perfection, with which care has been taken, so to breed them as to be fullest of flesh, and thickest covered both with flesh and fat in the best parts of them, that have the most *eatable*, and the least *offal* parts in them, is among the nondescripts of the present age, and generally speaking, it is as little understood as described. The Honourable Board lately instituted, will find in their enquiries, that the stock kept in the greatest part of this kingdom, is of such a kind, as a greater loss attends the keeping of than can be imagined, unless examined into; for instance, the sheep in general are grazed a year longer

longer than they need be, if bred as they ought. The individuals concerned, and the community at large, suffer from this defect ; for wheresoever this is the case, the man who breeds and feeds his own sheep, will always send one-third less stock to market, than he otherwise would do. A sale of stock is at hand, of a gentleman, retiring from business, and will be in the ensuing week, two hundred breeding ewes will be disposed ; it is said these will make an immense sum, two thousand pounds is talked of, but if they make one thousand pounds, five pound a piece, will any of the antediluvian breeders and graziers say, that this is phrenzy, when probably they will be divided into lots of five each, and that no one person will purchase two lots. Among so many purchasers as here will be, surely prejudice itself (which now upon this score is laughed at, and is often distinguished by the term of ignorance) will allow there may be some judgment. When this sale is over, I have no doubt but catalogues of prices and purchasers will be issued, as was the case of the late Mr. Fowler's neat stock in Oxfordshire ; after his sale, catalogues were circulated, and the preface to them has a great deal of sound remark and good sense in it, and though a trifle, deserves a place among the collections of this noble society. The principles of breeding stock here attended to, must be supposed to have their origin somewhere, and here the ingenious Mr. Bakewell must be mentioned, who with a small property in the outset of life, attended to this mystery, and has clearly enlightened it. The triumph of prejudice and error over him in his clouded situation, during the fatal American war, was universal and no less illiberal. But he has risen the greater from his fall. His disciples increase every day, yet he must ever be regarded as the head of the sect.

*Q. Am*

*Q. Are there no obstacles to improvement, and how would these be best remedied?*

*A. The bad roads are certainly obstacles ; these prevent us from claying our light silty lands, for in winter, in the part of these parishes, where clay only can be got, a team cannot be stirred, and these roads can never be made good."*

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### *LEVERINGTON—PARSONDROVE.*

**T**HE more elevated parts of the inside highland, consist of a strong loam, upon a silt, and the lower parts of a mild silty loam, lying upon a silt also, taken together, the whole may be advantageously employed in the culture of wheat, beans, oats, hemp, flax, cole seed, and turnips ; but it is unquestionable most proper for the culture of grafs and permanent pasture ; it contains about nine hundred acres, and is rented at twenty-four shillings per acre, on an average. Another description of inside land, consists of a clay, with a mixture of vegetable matter, or fen mould, of a good depth, lying upon a buttery clay or gault ; this contains about nine hundred acres, but in its present state of drainage, is not valued at more than fourteen shillings per acre ; is proper for the culture of wheat, oats, and cole seed. The fen land of the first quality, consists of a vegetable matter, or moor, mixed with an hazel-coloured loam, or tender sea clay, of a rich deep stable, upon a silty clay, and proper for the culture of wheat, oats, and cole seed ; contains about eight hundred and fifty acres, and is readily rented at twenty shillings per acre. The fen of the second quality, consists of moor, or

fen mould casually mixed with clay, from off the road hams, or small hills, which are intermixed through this level, and rising from the bed of the fen; of this there are about five hundred acres, but from the uncertainty of its drainage, is not valued at more than fourteen shillings per acre.

The largest farm is occupied under a lease for fourteen years, at four hundred pounds per ann. and with the rest of the parish, is under the following management: Upon the highland, first, oats upon the flag; second year, oats; third, wheat; the wheat stubble is fallowed, and dunged for the fourth years crop of cole seed, which is fed off, and the same rotation of three crops, and a fallow is again repeated. The produce 64 bushels of Oats per acre on first rate

28 ditto      Wheat ditto

40 ditto      Oats per acre on second rate high land

20 ditto      Wheat ditto

The practice upon the fen of the first quality, is first to pare and burn, sow cole seed, and feed that crop off with sheep, which hitherto has proved the most effectual remedy for the mischevious effects of the wire worm and grub; the second year, oats; third, wheat; fourth, oats; fifth, wheat; the sixth year fallow for cole seed; and it is either then laid down with two bushels of rye grafs, and eight pounds of Dutch white clover, or is continued another year with oats, and then laid down, and afterwards the new grafs is highly manured. The produce on an average of seven years, is sixty-four bushels of oats, and of wheat twenty-four bushels. The practice upon the fen of the second quality is precisely the same for the two first years; the third crop, oats; fourth, wheat; the fifth year, a fallow for cole seed, which is fed off with sheep, and the sixth year it is laid down with a crop of oats. The produce on an average of six years from this

A a

management,

management, is forty-eight bushels of oats, and twenty bushels of wheat.

The intermixture of property in the fen, and inside districts is much against an effectual drainage of those lands. An improvement to the drainage of the low lands in the inside might be made, by additional mills, properly placed. The cottages in this parish are rather scarce. The population and poor's rates are comprehended in Wisbich St. Peters.

*WISBICH ST. MARYS,  
including a Part of WISBICH ST. PETERS,  
and the Hamlets of GUYHIRNE,  
THOLMAS DROVE, and MURROW.*

IT is much to be regretted, that the information obtained here, is by no means so full or satisfactory as could be wished, being unfortunately suspected to be in the interests of the rector, I was not only received coolly, but treated with great jealousy and distrust. Such information as I was able to obtain, and such observations as I was enabled to make, are as follow: The inside high land of the first quality, lying between the Murrow banks and Wisbich St. Peters, and binding north westwardly upon Leverington Parson Drove, is an open, loamy soil, very similar in its nature, to that described in the preceding parish; it amounts to about three thousand acres, and is rented at twenty shillings per acre. The low land within the same district, consists of a fen mould, mixed with and lying upon a clay; is at present adapted to the culture of wheat, oats, barley-big, and cole seed, but from the uncertainty of its drainage, is not valued

at more than twelve shillings per acre. The course of husbandry much the same as in Leverington Parson Drove. The produce with-held.

The fen land of the first quality greatly resembles that of the same quality in the preceding parish; it comprehends acres, and is rented at fifteen shillings per acre. That of the second description, is chiefly composed of vegetable matter, or fen mould, with little or no mixture of silt, lying upon a turf moor; of this there are acres, which are rented at nine shillings per acre.

N. B. This fen is not so well drained as the fen of Parson Drove.

### THORNEY.

THE high-land consists of an ash-coloured, tender clay, of a good staple, lying upon a gault and gravel, and proper for the culture of permanent pasture, or grazing ground; it contains about six hundred acres, and is rented at twenty-five shillings per acre.

The fen of the first quality, is composed of completely putrified vegetable matter, with the natural clay, upon which it rests, forming together, a deep, strong, black earth, proper for grazing ground, in which it is at present chiefly and judiciously employed; of this there are about three thousand acres, which on an average are rented at eighteen shillings per acre. That of the second quality is a fen mould, or moor, from fourteen to twenty-four inches deep, lying upon a gault and gravel, and proper for the culture of wheat, oats, cole seed, and temporary pasture; it contains about six thousand acres, and is rented at sixteen shillings per

acre. The third class of fen land, consists of fen mould, upon a turf moor, under which it bears much of various depths, which finally rests upon a clay; this class of fen is proper for the culture of oats, cole seed, and temporary pasture; it amounts to about eight thousand acres, and is rented on an average at eleven shillings per acre.

The whole parish is the property of his Grace the Duke of Bedford, and notwithstanding that the farms are all held at will, from twenty-five to four hundred pound per ann. a spirit of improvement pervades the minds of every tenant, beyond what is to be met with in any other part of the county, and which can only be attributed to the very proper confidence, which the tenants repose in the justice and generosity of their noble landlord, and to the good sense and superior abilities, which mark the conduct of the gentleman in every particular, who has directly the management of this valuable property. The course of husbandry upon the fen of the second quality, is alone sufficient to illustrate this observation, and to justify the opinion.

The practice here, is first, pare and burn, but with great care, and under proper limitations; sow cole seed, and feed it off with sheep; second year, sow oats; third, oats or wheat, when the land is laid down for not less than six years with proper quantities of rye grass, white clover, and hay seeds. The first year of the new grass it is stocked very hard with sheep, which curbs the partial luxuriancy of the seeds, and makes them unite and mat at the bottom, forming a tender and inviting herbage; for the remainder of the period it is destined to remain at rest. The produce per acre

48 bushels of Oats weighing 33 lbs. per bushel

24 ditto Wheat ditto 56 lbs. ditto

The same rotation of crops is observed upon the fen land of the third quality, from which an equal bulk in grain is usually produced, though of less weight, and evidently of an inferior quality. The breeding of sheep has in a great measure been relinquished in this parish, on account of a weakness that prevails among the lambs; it affects the whole frame of the animal, and seems to be an extension of a disease, similar to that, well known in many counties, by the name of the rickets. The rickets however, is a disease originating in the animal, whereas this disease appears to have its origin, from the nature of the soil or herbage which the animal when young feeds upon; it is observed to prevail most generally upon new or lately laid down land, and it is the opinion of many farmers, that the rye grass contributes to this effect. A malady amongst the young stock, not unlike this at Thorney, has been noticed at Elm; where it is ascribed to the cocksfoot or cocksfoot grass: the same cause may probably contribute to produce a similar effect in both places.

The Lincoln and Leicestershire breeds of sheep are most approved; those at three years old, returned from grass or cole seed, usually weigh about twenty-two pounds per quarter, and their fleeces about eight pounds each. The mixed breed or crosses between the sheep of these two counties, is held here in high estimation. The Fifehire and Irish cattle are found to answer best for grazing; although the short horned Yorkshire breed, being more conveniently procured, are more generally in use; these latter however are but rarely fattened to the bone, without the assistance of oil cakes. The annual draining tax for the internal drainage of this parish, is about one shilling per acre, where there are about two hundred and fifty families, one thousand two hundred and fifty inhabitants, and the poor's rates are one shilling in the pound.

*WHITTLESEA.*



*WHITTLESEA.*

**T**HE field lying north eastwardly of the village, and adjoining thereto, (called Barsonby field) consists of a brown friable mould, of a good staple, lying upon a clay, and gravel, proper for the culture of wheat, barley, peas, clover, and turnips, and with the meadow land annexed to it, contains about four hundred acres, which taken together, are rented at sixteen shillings per acre. The second, or lattice high field; binding southwardly upon the foregoing, and adjoining the village upon the south-east, consists of a mixed brown earth, and gravelly, loam, of a tolerable staple, lying upon a clay and gravel, may be employed to advantage in the same manner with the last described; it contains about four hundred acres, and is rented at fourteen shillings per acre. The churchfield adjoining the village, answers to this last description, and is applicable to the culture of the same crops; it contains about four hundred and fifty acres, and is rented at fourteen shillings per acre. The fourth field adjoining the above, and binding westwardly upon the village, answers to the description of the first field, and contains about three hundred acres. The King's delph-land extending southwardly from Whittlesea-dyke, is found to be a fen mould, incorporated with clay; proceeding thence south eastwardly, the clay is gradually lost in an unmixed mass of fen mould, upon a turf moor, and bears muck; this is appropriated to the culture of wheat, oats, barley, cole seed, and clover, and contains about twelve hundred acres, which are rented at sixteen shillings per acre.

The pastures in severalty, called black-birch reach grounds, bind south eastwardly, upon the N. W. side of the King's delph lands; they contain about twelve hundred acres, and are rented at eighteen shillings per acre. The soil of the fen, consists of putrid, vegetable matter, upon a turf moor, under which is bears muck of different depths; it amounts to about seventeen thousand acres; and in its present deplorable state of drainage, is not estimated at more than five shillings per acre. The washlands amount to about three thousand acres, lying between the north and south banks of Moreton's Leam; but being subject to frequent overflowings, even in the summer season, from the highland freshes, is not valued at more than three shillings per acre.

The farms are chiefly held at will, and an internal round of cropping in the four common fields here prevails; first year, beans; second, wheat; third and fourth years, barley; this practice answers to the four shifts; dung is occasionally made use off on the bean stubble, for wheat, and also on the wheat and barley stubbles for the succeeding crops.

Produce per acre

18 bushels of Beans	
22 ditto	Wheat
24 ditto	Barley

The miserable condition of these fens, in consequence of the deplorable state of the drainage, preclude any comparison at present with those of Thorney. The number of cottages are very unequal to the families, as five distinct families have been found residing in the same house; the population here is not ascertained, and the poor's rates in this

this parish, are about two shillings in the pound ; these have been much reduced within these few years by farming out the poor, under which system they are at present well fed, and properly attended to.

**A COMPARATIVE VIEW of the present Average, and the eventually improved Rental, or Value, of the County of CAMBRIDGE, distinguishing each Description of Land, and the probable Improvement thereon, together with the annual Amount of the Difference in Favor of Improvement.**

Description of Land.	Number of Acres.	Present Rental, or Value, per Acre.		Total Amount of the present Rental, or Value.		Improved Rental, or Value, per Acre.		Total Amount of Improved Rent, or Value.		Total Amount of difference of Rent in Favor of Improvement.	
		£.	s. d.	£.	s. d.	£.	s. d.	£.	s. d.	£.	s. d.
Enclosed Arable	15000	0	18	0	0	0	18	0	0	0	0
Open Field Arable	132000	0	10	0	0	0	18	0	0	52800	0
Improved Pasture	52000	1	0	4	0	1	0	4	0	0	0
Inferior Pasture	19800	0	10	9	0	1	0	4	0	9487	0
Wood Land	1000	0	15	0	0	0	15	0	0	0	0
Improved Fen	50000	0	15	0	0	0	15	0	0	0	0
Waste and Unimproved Fen	150000	0	4	0	0	0	14	0	0	75000	0
Half Yearly Meadow Land	2000	0	12	6	0	1	1	0	0	850	0
Highland Common	7500	0	10	0	0	1	1	0	0	4125	0
Fen or Moor Common	8000	0	3	0	0	0	13	0	0	4000	0
Heath Sheep Walk	6000	0	2	6	0	0	2	6	0	0	0
	413000									372271	10
				226009	0	4				146262	10



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## PART II.

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### ARABLE.

THE preceding Journal, Abstract, and General Average, show so clearly the nature of the soil, and its value, to the proprietors, the occupiers, and the public at large, that little further should seem necessary, to call attention towards the adopting of such general measures, as are evidently justified in the few instances of exertion that have occurred in the survey of this county. The laying of the intermixed property together, and in severalty, which is now dispersed in the common open fields; and enclosing, where such a measure shall be found advisable, appear to be indispensibly necessary, as previous steps, to the general improvement of the highland part of the county; but as these objects involve a great diversity of interests, and as it is material that the Board should understand the general disposition as fully as possible, I have made it my particular care, to mix, and converse with the yeomanry of the county, and in their sedate, and sober moments, to possess myself fully of their experience, and local knowledge; and finally, to ascertain the general sentiment, as to this important innovation upon the establishment of ages. A few have given an unqualified dissent, but they were flock-masters; others have concurred under certain limitations, but the mass of the farmers are decidedly for the measure in question. The general average of the rent of the enclosed arable, compared with that of the open common field arable, in the whole county, exceeds the latter in the

B b 2

proportion

proportion of eight shillings per acre, and the average produce of the former, exceeds that of the latter, as under

	Bushels	Pecks
Wheat	3	1
Rye	0	3
Barley	15	1
Oats	1	1
Peas	2	1

But if a single instance be adverted to, and a comparison made between the parishes of Childersley, which is enclosed, and Hardwicke, which remains in open common field, and which parishes, appear by the journal, to consist of a perfectly similar soil, and are divided only by a hedge row; the excess of the produce in favour of the enclosed, will appear infinitely more abundant, viz.

Childersley enclosed		Hardwicke open	Excess of produce
24 bushels of	Wheat	16 bushels	8 bushels
36 ditto	Barley	18 ditto	18 ditto
36 ditto	Oats	18 ditto	18 ditto
20 ditto	Peas and Beans	8 ditto	12 ditto

Now if the good effects of enclosing were even to stop here, surely sufficient benefit is apparent to justify the general principle; but when to that is added the exemption from a disease, the dreadful consequences of which, have desolated the sheep walks in most of the neighbouring parishes, whilst in Childersley and Knapwell (both of which are enclosed) not the least shadow of the disease, has made its appearance; it is surely reasonable to conclude that it is highly expedient; relying fully on the wisdom of parliament, for all the arrangements which necessarily apply to the complete adjustment of so complicated a business.

ENCLOSURE.

## ENCLOSURE.

A few observations in addition to what has been just said upon this subject, will be sufficient to convey my decided opinion in favor of this measure. It is universally acknowledged by all writers on political œconomy, that the population of a country, must ever depend upon the means which it possesses, and the proper application of those means, for subsisting its inhabitants. Britain at this time unquestionably possesses the unemployed means of subsisting in addition to her present numbers, one third more of inhabitants; that such an augmentation must be deemed politically right, there can be no question; because the internal strength, and productive labour of the nation, would be encreased. By inviting to early marriage the peasantry of the country, who under their present want of confidence, that their industry will enable them to support an infant off-spring, are not allured to the gratification of an early and generous passion, which lawfully indulged, is doubtless of the highest political as well as moral consequence. Hence the rapid encrease of the inhabitants of North America, where by propagation only, exclusive of the accession of foreigners, their numbers are estimated to double in twenty-eight years. That the objects for the employment of the poor, would be multiplied, there can be no doubt, when we look at the additional quantity of labor, the country will demand from a general enclosure. The fencing, draining, claying, marling, ploughing, sowing, reaping, mowing, threshing, that will then be necessary to attend to, over and above what the business of the country at this time produces, are objects, which, from their employment of the poor, cannot fail creating in the most



most essential degree, the greatest moral and political advantages; whilst the idle objection, that in the event of a general enclosure, there would be more land thrown into pasture than there ought to be, is too weak and frivolous to deserve attention.

## TENURES.

THERE is no greater error in the whole œconomy of country business, than that which the gentlemen of Cambridgeshire, are too apt to fall into, respecting the tenures they grant of their estates. Few are inclined to give their tenants such assurances of the certain and quiet enjoyment of their improvements, as reason dictates and justice demands. Had the same jealousy prevailed in Norfolk, on the early improvement of that county, in vain would the landlords, in conjunction with their tenants, have expended such large sums in claying, marling, and otherwise improving their estates; if the tenant had not been assured of an eventual benefit, and reward for his expence and labour, under the protection and encouragement of a lease for twenty-one years. The general state of the husbandry in the county of Cambridge, demands the like assistance from the proprietor as to the means, and the same indulgence in point of possession, as a reward for the industry and labour of the tenant, who will otherwise be little inclined to bury his property in the earth, or improve the surface by the sweat of his brow. In all cases however, the most strict and rigid observance ought to be exacted, as to the performance of the stipulated covenants, but the confidence of a lease, is indispensable to the advancement of agriculture in every county; and where it is found so backward as in the county of Cambridge, it is highly expedient, that

that the term should not be of a shorter duration, than that of twenty-one years; though in the highly improved counties, such an extension of time, may not be found so essentially necessary.

## GRASS.

THE proportional difference in the value of the superior, and partial improved pasture, and the totally unimproved and inferior, is sufficient to induce some alteration in the present management of the latter described lands. The general average does not illustrate this difference in so full, and ample a manner as necessary; nor could that have been done without forming an intermediate class, which certainly would have been attended to, had the necessity of it, occurred upon the commencement of the survey. The principal divisions of the pasture grounds which are noticed, are first, those which produce a rich tender grass and herbage, from a loose black soil, proper for feeding or grazing cattle, and worth from twenty-five to thirty shillings per acre. The second, a more coarse, but luxuriant grass and herbage, produced upon a close, moist soil, proper for the depasturage of milch cows, and store cattle, worth from fifteen to twenty shillings per acre. The third class produces very coarse, sharp, sour grass and herbage, vegetating very late in the spring from wet, cold, and compact clays, worth from five to ten shillings per acre: this last division owes its inferiority, to the wet, cold, and compressed state, in which it has lain for ages, and is only to be relieved by hollow draining, breaking up with the plough, and exposing the soil to the meliorating influence of all those external powers; the benign effects of which, long experience has clearly proved to communicate fertility.

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The two first classes are to be held sacred from the plough, though the latter of them may be improved by hollow draining, manuring, and scarifying the surface, with a coarse bush-harrow. By previously hollow draining and breaking up with the plough, in two or three years, every remnant of the former surface, of the last or third class, together with the roots of all the weeds, and beggary it produced, will be completely putrified. The soil thus opened, becomes pulverized, mellow, open, free, and ready for the reception of the following proportions of grass seeds, proper for permanent pasture, viz.

- 6 lbs. of perennial red clover, called cow grass  
(*trifolium alphonse*)
- 4 lbs. of Dutch white clover, called honey suckle  
(*trifolium repens*)
- 3 lbs. of narrow leaved plantain, or ribwort
- 4 lbs. of yellow trefoil, called black nonsuch
- 3 lbs. of burnet, and
- 1 bushel of rye grass per acre

In place of the latter article, two bushels of clean light hayseeds, which when properly sifted, and well cleaned, ought to weigh twenty pounds to the bushel, or four gallons of timothy (cat's-tail) and four gallons of fescue (dog's-tail) may be recommended in preference to the rye grass. The crops which should not exceed three, and which may be taken from the old pasture ground before it is again laid down, will amply repay every expence that may arise in the hollow draining, stubbing, levelling the ant-hills, and purchase of grass seeds; when this description of land will be thus improved from five shillings, or seven shillings and six-pence, to fifteen shillings or twenty shillings per acre. Were the climate of the south east of the island, less favourable to the culture of grasses than it is, necessity would have driven

the farmers to the same practice, which the want of so good a climate has long ago induced in Scotland. The plough is there brought forth, and used with great propriety, as a sweetener of the soil, and the new pasture lay, is generally estimated at three times the value of the old; such would be the necessary consequence of the same management in other parts of the island, where under similar circumstances it may prudently be recommended. The absence of the sun's rays, and the consequent chill from that deficiency, together with the effect of the springs, lying in general so very near the surface, compels the husbandman in Scotland, to resort more frequently to the agency of the plough, than under a more genial climate and favoured soil, would be necessary. About once in twenty or twenty-five years, the old pastures which lie upon close, and compact clays (as are described under the third class,) may require opening with the plough, in the south east part of the island; and be highly benefited by the management above recommended.

### PARING AND BURNING.

THIS practice is admissible to a certain extent upon land, composed entirely of vegetable matter, where the water is at command, and where lowering the surface is not likely to be attended with material inconvenience. Paring and burning is here the only effectual means of quickly bringing land of this description, into a profitable state of cultivation: In such land, wherever there is a considerable depth of vegetable matter, after a few years rest, the surface becomes uneven, resembling a field covered with innumerable ant-hills; and the tops of these inequalities, producing little herbage, and that of an inferior quality, are only to be improved by a judicious application of the plough, and burning

about one third part of the thinnest of the flag, that can possibly be pared. Even here this practice ought only to be permitted under certain restrictions, and performed with great care; but to extend the same, to the thinly stapled high lands in the county, thereby dissipating the vegetable mould, and leaving a surface of cold, sour clay, harsh gravel, or other inert matter, is so highly destructive to the country where it prevails, that in the King's, the Queen's, and other counties in Ireland, where paring and burning the thin high lands have been unfortunately practised, extensive and naturally fruitful tracts, have been reduced to the lowest, and most exhausted state of barrenness and poverty; and as the like effects, must on a certainty under similar circumstances, follow the same practice in this kingdom; it is not easy to comprehend the reasoning of those persons, whose judgment leads to the general recommendation of so pernicious a system.

## FEN.

UPON this subject, the want of opportunity to revisit the great level of the fens, and the parishes bordering upon them, is a circumstance much to be lamented, as the quantity of fen land that is in an improved and profitable state, and that which is drowned and of little value, would thereby have been more correctly ascertained. Reference, however, may be had to Chatteris, Elm, Leverington Parson-drove, Wisbich St. Mary's, and Thorney, for a comparative view of what the lost country of the fens is capable of, in point of improvement, by recovering the natural outfall of the middle, and south level waters. The fenny land in the above parishes, under improved cultivation, amounts to about fifty thousand acres, and yields a produce far beyond the  
richest

richest high lands in the county; averaging a rent of more than fifteen shillings per acre: Whereas the waste, the drowned, and partially improved fens, amounting on a moderate computation, to one hundred and fifty thousand acres, cannot be fairly averaged at more than four shillings per acre. Hence in this county only, an encreased rent of ten shillings per acre, amounting to seventy-five thousand pounds annually, may be reasonably expected from a complete, and effectual drainage of the fens, and restoring to the country, a tract of far more fruitful, and productive land than is to be met with of the like extent, in any part of the Island.

### FEN OR MOOR COMMON.

IN the highland part of the county, there are about eight thousand five hundred acres of this description, which at present, contribute little to the support of the stock, though greatly to the disease of the rot in the sheep and cows: These commons generally lie well for draining, and are otherwise capable of very great improvement; but until a Court of Sewers shall be established, with powers to oblige the mills upon the several streams which pass through these moors, to be pitched lower; so that the mill-dams shall not hold the water up to its present height, and over-ride the surface of the commons as they now do; no remedy can be applied to this very serious evil, which must necessarily be removed, before any improvement can be undertaken.

## HALF YEARLY MEADOW LAND.

THESE lands lying dispersed through the hollows of the open fields, and receiving the richest juices of the surrounding lands, even in their present neglected state, are rented on an average, at twelve shillings and six-pence per acre only ; but would by proper draining, and being put into severalty, readily be improved to thirty shillings per acre, as the crop which is now only mown twice in three years, would then be annually secured.

## HIGHLAND COMMON.

THERE are about seven thousand five hundred acres of this land in the county, which in severalty, would be readily improved, to the annual rent of a guinea per acre. In its present state, it cannot possibly be valued at more than half that price; though no alteration in the present mode of depasturing, can apparently be made, to encrease the present estimated value.

## HEATH SHEEP WALK.

THIS land appears to be chiefly appropriated to the original design of nature ; the surface or skin, forming a tender and wholesome food for the sheep, which are generally depastured thereon. The staple of the land is in general so very dry, and thin, that once broken, it will be ages before it can acquire an equally valuable turf or covering with that it now produces. The substratum is generally a chalk, though in some places, there is found a deep, rank sand, abounding with flints, and where the surface is broken, the sand in the dry season of summer

summer, is very liable to be driven by the wind, to the inconvenience not only of the adjoining lands, but of those at some distance. Were these plains in severalty, and were it practicable to raise live fences upon them, trefoil, cinquefoil, and rye grass, would be found the most profitable grasses to cultivate: The less however that this kind of land is disturbed, the better.

### SHEEP.

IT appears from the general average, that one thousand and sixty-two sheep is the proportion per parish in the sixty-two parishes, in which the number kept was ascertained. This ratio multiplied by one hundred and forty-four, the number of parishes in which sheep are kept in this county, is equal to one hundred and fifty-two thousand nine hundred and twenty-eight sheep, for an extent of highland country of about two hundred and forty-three thousand and three hundred acres, which is not quite one and a half acres per sheep. This general stock may be divided into three distinct breeds, though there are many intermediate shades amongst them. The Norfolk, the West Country, and the Cambridgeshire, are the principal ones. The three years old wethers of the former when fattened will average about sixteen pounds per quarter, and about two and three quarter pounds per fleece; and the West Country breed will average about eighteen pounds per quarter, and four pounds per fleece. These two sorts are generally found between the Cam and Mildenhall rivers, extending along the plains of Newmarket Heath, towards Linton, Foulmire, and Royston, binding upon the counties of Suffolk, Essex, and part of Hertfordshire, and to the head of the valley distinguished by the name of the Dairies—Crossing this Valley, and extending thence



thence westwardly towards Caxton, and northwardly towards the fens, binding east on the river Cam, and south and westwardly upon Bedford and Huntingdonshires, the common Cambridgeshire breed prevails; the three years old wethers, of which sort, when fattened to the bone, will average about fourteen pounds per quarter, and two and a quarter pounds to the fleece

Proceeding into the Isle, a medley of the Norfolk, Cambridgeshire, Berkshire, Hertfordshire, Southdown, West Country, Lincoln, and Leicestershire breeds are found, but on approaching the country about Wisbich, extending thence northwardly towards Holland in Lincolnshire, an inferior breed of the Lincolnshire sheep generally prevails: the three years old wethers of this description, averaging, when fattened, about twenty-four pounds per quarter, and twelve pounds per fleece. In this neighbourhood, a cross between the Leicester and Lincoln breeds has been tried lately, and is much approved.

This part of the country is very happy exempt from the ravages of the *rot*; the cause of which, so far as the enquiries and observations made in the course of the survey will lead to a conjecture, seems to arise from an extremely wet season in summer. Extremely wet winters do not produce this disease. The moors, low grounds, and wastes, in the common open fields, upon which the sheep are by necessity obliged to feed, as well in wet, as in dry summers, frequently in wet seasons, become overflowed with the highland waters, which leave prodigious quantities of filth and sullage upon the grass and herbage, in which is most probably involved the germin, or egg of those snails or insects, which being conveyed with the food into the stomach of the sheep, and there meeting with a proper nidus become  
vivified,

vivified, and invited by the gall, their proper aliment, pass through the bileducts into the liver, where, in a certain stage of the disease, they encrease to the frightful size and number which destroy the animal.

Another species of rot, was noticed on the survey, which does not appear to be ascribable to the like cause. This is called by the farmers, the *blood rot*. The liver appears to the eye in these cases to be perfectly sound, and as free from disease, as in the most healthy animal; it is however covered with an extremely thin transparent membrane, as tender as a spider's web, but which the smallest pressure imaginable, immediately ruptures, when the whole liver resembles a mass of coagulated blood, without any cohesion whatsoever; the liver and intestines, at this time, are free from any appearance of insects, alive or dead; nor was it understood from the farmers, that the liver in the state before mentioned, was offensive to the smell; though certain it is, that in its progress to that condition, it must have been rendered gradually inert, and corrupt, as it became disorganized.

## COWS.

The various mixtures of this cattle that are found in this county, are not easily enumerated: the Suffolk polled, the Craven, the short-horned Yorkshire, the Derby, the Welch, the Leicester, the Fifehire, Gloucester-brown, and the common Cambridgeshire, are the breeds of cow cattle most generally preferred; nor is it conceived possible to mould this variety into any one uniform sort, until the open field lands, are laid into severalty, and the coarse and low lands, drained  
and

and improved, so, that by subsequent cultivation, it shall be ascertained, what are the species of cattle most proper for the then improved grasses and herbage, in the several districts of the county.

From Isleham to Newmarket, Linton, Caxton, and northwardly to the fens, these breeds prevail either distinctly, or casually compounded; in which latter case, the animal, generally speaking, is badly formed, small, and when in full milk, seldom affords more than four quarts at a time. In the neighbourhood of Ely, where the herbage is infinitely superior to that in the higher parts of the county, it is a matter of concern to observe that so little attention is paid to the improvement of the common breed of cow cattle. In the neighbourhood of Wisbich, a very sensible alteration in this particular, for the better, is with pleasure observed.

To the considerations of the general inferiority of the cows in the upper part of the county, are to be added some important evils, which are perhaps, scarcely to be paralleled in any other county in the kingdom; (viz) the frequency of slipping calf, and the perishing by the rot; a few conjectures may be hazarded upon the cause of the former, whilst the cause of the latter, evidently speaks for itself; arising from the foulness of the herbage in the low grounds, on which the cows depasture.

It is a truth generally acknowledged, and very well established, throughout the whole of animated nature, or at least, so far as hath come within the view of writers upon comparative anatomy, that all animals, in a state of gestation, require for the preservation of their own health, and the sustenance of the foetus, the most uniform circulation of the blood, and other fluids; to preserve which, in some constitutions, apparently very unequal to such exhaustions,  
frequent,

frequent and repeated bleedings, when in that state, are indispensibly necessary : this material point in the oeconomy of bleeding cows, is observed to be much neglected through the whole valley of the dairies, nor is it generally practised on the margin of the fens, or in other parts of the country, where the accident of abortion is likewise very common. The business of milking cows, and the extended scale of necessaries, comforts, and luxuries, which are derived by the human race from the juices of that animal, are all to be considered as artificial, and as a direct inversion of the laws of nature.

The cow in a wild state, and under the control of her natural instincts only, at a certain age, like all other female animals, weans her young ; but in a domesticated state, the keeping of her low, and drawing from her twice a day all the richest of her fluids, and that at a period of her pregnancy, when the foetus she is carrying, is so far advanced and grown, as to require every particle of nourishment that the system of its mother can assimilate and convey, is surely such a dereliction of the laws of nature, as to require in the event of necessity, the most generous and fostering care of the person who thus drains, and exhausts the animal of its essential juices, and deprives it of the only possible means of subsisting the embryo in its womb. When this exhaustion is carried beyond a certain point, and the necessary nutritious secretions are withheld, the principle of life must be extinguished, and abortion must consequently ensue.

Cows, like every other animal bearing young, are subject to miscarriage, by fright, or by external injury ; but in the instances before us, taken from the journal, it does not appear possible to ascribe so general a calamity, to such partial and accidental causes, though it may be attributed in

a degree to mismanagement, and a combination of those causes, before attempted to be explained; or may arise from some noxious herb, which the animal in the greediness of hunger involuntarily swallows.

It is however, sufficient that the evil exists, to engage the wisdom of the Board in devising a remedy. That cows are timid, and subject to fear, in common with other animals, there can be no doubt; for one spoonful of blood will set hundreds of them in an uproar: but as they are not frequently exposed to alarms of this nature, few accidents in consequence thereof are likely to happen.

Mares also in a state of gestation, are particularly obnoxious to fear, induced from blood, or recently slaughtered carcases; and hence the hunters in the interior of America, will encounter any fatigue, rather than expose their mares to the accident of slipping their foals, and endangering their lives, by loading them with a carcase, of venison, or a load of buffalo, or bear's-meat, to carry, though but for a very short distance to the camp, or village; well knowing that such accidents are thus produced; and in that country are deemed inevitable.

## WOODLAND.

FEW woods, it may be presumed, afford less matter for observation in the kingdom, than the woodlands of Cambridgeshire, which are thinly dispersed; and this nakedness must remain, so long as the county continues in an unclosed state. The journal sets forth in many places a kindly soil for the culture of oak, ash, and elm, and on the chalky lands for that of beech; all of which in the event of a general enclosure, might be cultivated to advantage. The  
under

under growth of the few detached woods in the county, pays at the rate of about fifteen shillings per acre per ann. and when there is a fell of oak timber, (which rarely happens) the bark is usually rated at twenty-five per cent. on the value of the timber.

## POPULATION.

THE proportion of four hundred and twenty-eight souls per parish, in the eighty-nine parishes, whence such information could be obtained, applied to one hundred and forty-four parishes, gives the number which the county contains, to be sixty-one thousand six hundred and thirty-two. To this aggregate should be added nine thousand eight hundred and sixty-eight in the Town and University of Cambridge; three thousand seven hundred and seventy-nine in the City of Ely; about five thousand in Wisbich, and for the sake of round numbers, about two thousand seven hundred and twenty-one in the hamlet of Merch; making the whole population of the county to amount to eighty-three thousand inhabitants. This however falls greatly short of former calculations, which have stated the population at one hundred and forty thousand. How such an estimate was formed, is not easily to be comprehended, as it is proved from the following extracts, procured from the registers, that the number of inhabitants in those parishes, have of late years been considerably encreased. In the last thirteen years there appears to be an encrease in the City of Ely of one hundred and forty-seven persons, and in the parish of Waterbeach, which now contains about five hundred and thirty souls, there has been an encrease within these last seven years of sixty-seven inhabitants, equal to an encrease of one-eighth of

the whole number: and within the last twenty years, the parishes of Wimple, Whadden, Arrington, and Kingston, all of which are very small, have encreased in number one hundred and twenty souls (exclusively of any addition that may have been made by artificers and strangers) from all which considerations, it is more than probable that the former estimate was infinitely over-rated; and that fixing the population on the present day, at eighty-three thousand souls, would be found nearly correct, though this question still remains to be ascertained from absolute enumeration.

### PROVISIONS.

THE general average price from repeated statements in different parts of the county, appears on the several articles to be as under, viz.

Beef	4½d per lb.	Mutton	4½d per lb.	Pork	5½d per lb.
Veal	5½d per lb.	Cheese	6d. per lb.	Flour	1s. 11½d per stone
Butter	10d. per lb.	Potatoes	1s. 4d½ per bush.	or 2s. 3d. the peck loaf	

All these necessaries of life have increased to their present value, within the last few years; and it is with concern to be apprehended, there is not at this time, the most remote prospect of a reduction in any of the prices, which certainly do not bear a proportion to the

### VALUE OF LABOUR.

THE general average of men-servants wages through the county, is ten pounds per ann. maid-servants four pounds ten shillings; that of boys forty-five shillings, and girls, washing included, thirty-eight shillings a year. During eight months of the year, the wages to the day labourer is seven shillings

shillings per week ; after which, for the next two months, it is increased to nine shillings ; and the remaining two months, during the time of hay and corn harvest, he receives two shillings and six-pence per day, or fifteen shillings per week ; amounting in the whole to twenty-two pounds four shillings, if the labourer is blessed with constant health and employment during the whole year. To this may be added the casual earnings of his wife and children, which if estimated at three pounds sixteen shillings, will make the total amount of the earnings of a poor family, twenty-six pounds per ann. How far this is equal to the demand for the common and absolute necessities of life, the Board (there can be no doubt) will in due time take into consideration. Upon all occasions however it is greatly to be wished, that as much of the country business as possible, should be done by the great, or task work, which thus performed, is ever more to the satisfaction of the master, than by the day ; whilst the labourer, being exempt from the hourly control of his employer, considers his time when thus engaged, as his own ; and feels an independency in his exertions, that lightens his fatigue, and distinguishes the industrious workman, from the idle and less deserving.

In the county of Northumberland, the honesty, and exertions of the threshers of the crop, are wisely secured, by making them independent of their mailers. A regular account of the number of sheaves which are deposited in the time of harvest, in the barn, or comprising the stack, is accurately taken ; when these are to be threshed, the farmer attends the thresher, and sees him thresh, dress, and measure the produce from a certain number ; from this result, the contents of the barn, or stack are ascertained, and according to the sort of grain, a certain proportion is allowed to the  
thresher



thresher for his labour; the keys of the barn are then given to him, and the instances are very rare, where the master has occasion to complain, or that the thresher fails in rendering the stipulated proportion to his employer. Were this excellent method in general practice over the island, much of the grain which is now turned out with the straw would be preserved; the anxious attendance of the farmer to his barn doors would be spared, and the industrious man, would ensure a reward for his extraordinary exertions.

## HORSES.

NOTHING in the husbandry of Cambridgeshire is more replete with error, and abuse, or more capable of reform, under the present circumstances of the county, than the feeding, and working management of farm horses. The only true judgment to be formed of this economy, is by a comparison between this and that of other counties. In Norfolk the plough-teams consist of five horses, which are under the care of one man, who feeds, and cleans them all; and occasionally works two pair of them, the odd horse being generally employed at harrow, and at job work. These horses are generally taken into the stable about the beginning of November, and receive four bushels of corn per team per week, till about Candlemas, when their allowance is increased to a bushel per week per horse. From November until Candlemas they are racked up, with pea, or well saved clover barley straw; when the spring work begins to press, the rack meat is changed for clover, rye grass, and trefoil hay. The road teams, which are of a larger and heavier breed, and which are employed in long journies, in carrying out the crop, consists likewise of five horses, under the care

of a single person also ; and these are allowed six bushels of corn per team per week, and upon occasions of very extraordinary exertions, an extra feed of corn per horse is given them ; and through the winter, they are constantly racked up with clover, and rye grass hay. The mode of working these horses is thus : The men who look after them, are seldom in bed after three o'clock in the morning, particularly in the spring season ; in the dead of the winter they rise about four, (and as candles are always allowed for the purpose) they clean, and feed (with sifted chaff, in which they put a small portion of oats) their horses, till breakfast time, which is sooner or later, according to the length of the days, usually reaching their ploughs (with one pair) by the time they can conveniently see to work ; they plough till noon (twelve o'clock) when they drop their traces, and shuffle home as quick as they can to dinner. Should it not immediately be ready on their arrival, they collar, and prepare the horses which were left at home in the morning, and immediately after dinner, proceed with each another pair and plough till night. This practice continues through all the dead time of winter, and until such time as the days are of sufficient length to permit their working seven hours at a journey. As the spring advances, the ploughs are shifted, *i. e.* the servant who has the care of the team, rises at three, attends his horses, and after his breakfast, gets to plough about five ; at eleven o'clock he is relieved by a labourer, who goes out to him with a pair of the horses, left at home in the morning, and who ploughs till three in the afternoon. During this interval, the servant refreshes himself, and the pair of horses, and returns with them to the labourer, whom, with his horses, he relieves, continuing to plough so long as he can see. When the business becomes still more urgent, particularly during the season for sowing barley, from the middle of April until old May-day, they make four journies with two pair of horses ;

and the wheels of the ploughs are constantly kept going, from four o'clock, or earlier in the morning, until eight at night; a quarter of a peck of oats, as an additional bait, being allowed each horse for the double journey. The seed furrows are never carried larger than four to a yard, and it rarely happens that the traces are dropped, after a four hours journey, without completely finishing seven-eighths of an acre. Thus is this business usually conducted in that county, which is now to be compared with the general management in the feeding and working of farm horses in the upper parts of Cambridgeshire.

The scarcity of pasture ground, the want of proper attention in the farmers to the raising of green food for soiling their horses in summer, and the great neglect in the culture of artificial grasses, all conduce to an expence in supporting the farm horses in the upper parts of this country, that is absolutely enormous. They are kept in the stable throughout the year, each horse is fed with a peck of corn per day, with as much chaff, chopped straw, and hay, as they can eat, and work but one journey in the day; which seldom exceeds seven hours, but never eight; except in the neighbourhood of Leverington Parson-drove, and Thorney, where two journies a day are not unusual, ploughing from seven to twelve, and from two in the afternoon until night; or when the day will admit of it, till seven in the evening, doing about an acre each journey.

## IMPLEMENTS OF HUSBANDRY.

IN the fens, the common fen plough, with a running coulter, which with the share, is constantly filed and kept particularly sharp, is in constant use. By carrying only two furrows

furrows and an half to the yard, about an acre and an half is usually ploughed in a journey of seven hours. To these ploughs is frequently annexed an appendage, which in the fen country is called a boy, the business of which, is to lap in the rushes, reeds, and other early produce of the fens, on which the plough-share lays the earth, and thus completely buries under the soil. It is usual to work three horses a-breast in these ploughs, and it is truly astonishing to observe with what dexterity, and adroitness the ploughs and horses are managed. The half and three quarter Dutch ploughs, together with the common swing and foot ploughs, are in the highland part of the county in general use.

The dagger, whole and half winged shares, are variously employed, but one general plough, with three occasional different shares, might be introduced with great advantage. The principle to be recommended, should be a compound of the Norfolk and Hampshire wheel plough, with a short well turned iron plate, inclining gradually to the point of the share. There are no lands in the kingdom, which require more attention in ploughing than the stiff ones in this county. To plough with a regular uniform pitch, and to cut the bottom of the furrows clean, and even from side to side, is a great desideratum, in good husbandry, but that is not possible, to be attended to, correctly with the common foot plough, which is usually resorted to, for breaking up the fallows of Cambridgeshire. The foot at the end of the beam, in these ploughs, which drags upon the ground, and is contrived as a regulator to the pitch of the plough, is at so great a distance from the point of friction, as to occasion the share, in strong and hard ground, to be constantly and alternately dipping, and rising upwards, rooting too deep, or skimming too shallow. A fixed permanent rest for the

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beam,

beam, as in the wheel plough, would obviate this objection, and save the ploughman the necessity of setting his plough too deep, which he is continually obliged to counteract, by pressing upon the handle or plough tail, and consequently unnecessarily augmenting the draft and weight upon his horses, by the increased friction that is thus induced. The harrows, carts, waggons, and all other implements of husbandry, are after the common sort, and not worth the time of a particular description.

Mr. Shepherd, steward to Mr. Tharpe of Chippenham, has invented, and now uses harrows of a particular and uncommon construction. A drawing of these harrows, with their exact proportions, would have been very acceptable. The single harrow appears to consist of five beams, with six teeth in each; the beams are not laid parallel with each other, but fanning, and forming the tail of the harrow about six inches wider than the head; the beams are all curved, forming a convex upon the top, and when connected together, a concave space of about an inch and a half perpendicular, under the middle of the harrow, over and above what would necessarily obtain, were the beams straight, and parallel to the surface; the teeth are all curved, feather or basil edged, and are set springing with their sharp edges and points forward; and their length in the front of the harrow, is about six and a half inches, which gradually increases, till on the tail of the harrow they are eight inches long. Harrows thus constructed, have a wonderful effect, in drawing into the ground, rather than scratching upon the surface, and in dividing the clods, by cutting through, rather than by rubbing, or grinding them against each other; and by gathering the twitch grass, in the increased space, formed  
by

by the concavity of its beams, it is rendered an excellent cleansing harrow, and does much credit to the ingenuity of the inventor.

## HEMP.

THE culture of this important plant, begins deservedly to be regarded in a far more favourable light in the present day than formerly. In those countries where it is generally cultivated, it is considered as an extremely exhausting, and impoverishing crop, but in parts of this county, where the *occasional culture* of hemp, forms a part of a system of perpetual cropping without rest or fallow, it is not only viewed as an ameliorating crop, but experience proves that upon those lands it is the best possible preparation for a crop of wheat. Flax is cultivated by way of a change upon the same lands.

The fertilizing qualities of hemp upon the soil, may possibly be referred to the same cause, which so powerfully operates upon sowing grey peas on land in Ireland, when it is so far exhausted, as not to yield the quantity of seed in return of oats, or any other grain. But as the pea crop seldom fails, the land is thereby brought into so high a state of preparation, as to insure an abundant crop of wheat, without manure or fallow. Lands which thus become productive, probably contain a great quantity of vegetable matter, in an imperfect state of rottenness, and unfit for the food of plants. The combination of heat and moisture can only affect its perfect dissolution, and to the umbrageous influence of hemp and peas, which prevents exhalation and keeps the surface during the heat of summer, constantly moist, may be ascribed the good effects arising from these crops.

The average produce of hemp from the break, is about forty-eight and a half stone and of flax about forty-six and a half stone per acre. As these crops have been returned by various persons, in different stages of manufacturing, sufficient information could not be obtained as to the culture, and previous process for the manufacturer. The practice of water-rotting is generally prefer'd to that of dew-rotting, or simple exposure to the open air. In America, where hemp and flax are cultivated, upon an extensive scale, but where the heat of the climate at the season of exposure is more favourable to putrefaction, than in this country, dew-rotting is generally preferred, because its effects are observed to be more uniform, and the hemp and flax can be more particularly attended to, and the moment for binding and housing, (upon which the value of the crops greatly depend) is to be discovered and embraced with the fullest certainty.

## ROADS.

THE public roads in general through the county, are tolerably good; the private roads are very indifferent; and it is not very probable that they will be much improved under the present regulation of the surveyors of the highways. The materials for mending them in many places are extremely scarce, and lying at a considerable distance, are not to be obtained, without more particular attention is paid to the statute duty of each parish, and the present laws for keeping them in repair.

## RECAPITULATION.

## RECAPITULATION.

FROM the preceding statements, and from a due consideration of the information acquired on the survey and contained in the journal, it appears clearly evident that the complete and effectual drainage of one hundred and fifty thousand acres of fen land in this county, would produce an additional revenue to the proprietors only, an augmented rent of - - - - -

75,000 0 0

That the laying into severalty, or generally enclosing one hundred and thirty-two thousand acres, of open common field arable land, would yield an additional rent of - - - - -

52,800 0 0

That a general improvement of the coarse and rough pastures, amounting to about nineteen thousand eight hundred acres, would produce an increased rent of - - - - -

9,487 10 0

That the enclosing in severalty seven thousand five hundred acres of highland common, would produce in addition to its present estimated value, an increased income of - - - - -

4,125 0 0

That the draining, properly improving, and enclosing eight thousand acres of fen or moor common, would necessarily produce an increased rent upon its present value of - - - - -

4,000 0 0

That laying into severalty, draining, and improving two thousand acres of half yearly meadow land, would produce an encreased rent of

850 0 0

Total improvement of which the county is capable, according to the foregoing statements, is

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146,262 10 0

Stating the increased produce, at thrice the increased rent, hence per annum to the public -

438,787 10 0

Which at thirty years purchase, would increase the value of the national capital to the amount of - - - - -

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13,163,625 0 0







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APPENDIX  
TO  
*Mr. VANCOUVER's*  
AGRICULTURAL ACCOUNT  
OF  
*CAMBRIDGESHIRE*

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## TO THE READER.

MR. VANCOUVER, having annexed, to the preceding  
tions, the following Appendix, upon a question of the uti-  
quency to the agriculture of a very extensive district, it was  
advisable to print it, for the consideration of the Members  
Board, as too much light cannot be thrown on so important  
It is not proposed, however, to circulate this Appendix  
Report, though a perusal of it will be given upon special  
being made for that purpose, by any of the parties inter-  
contest, particularly to such as may be desirous of bringing  
accommodation, a circumstance that would be highly ac-  
the Board, and, it is believed, to the Public in general.



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# A P P E N D I X.

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## OBSERVATIONS:

*On the proposed Eau Brink Cut for the further draining*

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### PART I. OF THE FENS.

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#### SECTION I. *Of their Nature and Origin.*

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SO much has already been written on the subject of the fens, that when I presented my present undertaking, I greatly despaired of being able to add any thing of more than a few conjectures on the subject, trusting to the indulgence of the Board of Agriculture and subsequent reader, for such inaccuracies as the very short time that has been allowed me to examine the country, and form an opinion upon it, in some measure intitle. I am nevertheless, much concerned that an opportunity has not been offered me to make inquiries on this occasion with that minuteness and attention, with which the subject ought ever to be regarded, particularly where I have chosen nature principally.

As my leisure has not afforded me an opportunity of reading upon the subject, my facts, both historical and otherwise (touching the original and present state of the fens) are drawn solely from actual observation, and from conversations with the most intelligent inhabitants I have met with by the way in that hitherto ill fated country. From these conclusions will be drawn.





will make it his business to examine attentively the surface and structure of the general bed of the Bedford level, or the ancient and natural surface of which the great body of the fens now rests, and which bed consists chiefly of a salt or clay, *was once, and (for aught we know to the contrary) is at this time, and above the level of the sea to drain itself.* At the same time that I assume a point of unquestionable certainty, it is necessary to bear in our remembrance; a valley in which the level of the fens now lies, was then covered with wood, other parts of the country, particularly the counties of Huntingdon, Bedford, Bucks, Northampton, were one continued forest also; I am particularly desirous of improving being of consequence in leading to a more perfect knowledge of the primary cause of that vast mass of vegetable matter which now composes the body of the fens, and I illustrate it by a reference to the case of Ireland.

In former ages the country of Ireland was divided into principalities, colonized by various nations, and subdivided again into various tribes, a constant and cruel warfare appeared to be waged among them. At that time the whole country was covered with wood, and the power was obtained by one chieftain over another, or as their views of annoyance were answered by the measure, they set on fire (as has been done recently against the French) their adversaries' forests, thus destroying their strong holds, and despoiling their hunting grounds. The consequences were such, that many of the trees, felled by the fire, were thrown down by the succeeding winds, into and a cross which the drainage of the country was naturally performed. An obstruction to the passage of the waters was thus produced, and a large pond, or lake of water, soon spread over the whole level, which heretofore drained voluntarily through those channels which were now filled up. A prodigious quantity of putrid, and putrifying vegetable matter in the stagnation, afforded an immediate encouragement to the growth of vegetables of the aquatic tribe, which, growing and annually proceeding to decay, proved a constant and regular cause of the accumulation of vegetable matter, and finally became a marsh: from which stage (by gradual increase) it increased to its present bulk, forming what in Ireland is called a bog: which like the fens, and with water, swells in many places above the level of the country by which it is drained.

In the progress towards the improvement of a large tract of bog in the King's county in Ireland, a trench was recovered an outfall drain, 12 feet wide and about a quarter of a mile long, at the foot of which the bog was designed to be drained. The bottom of this drain was formed of a compact layer of gault; above which, in many places, there was a depth of twelve and fifteen feet; under which, and on the bed or resting place of the bog, there were distinct ridges and furrows, the indisputable remains of an ancient cultivation. In other places, the bog were found considerable quantities of oak, yew, and pine, all of which must have been more or less exposed to the action of fire; the more valuable pieces of wood were easily discovered by probing with a spit and then raised out of the bog; and

which I remember particularly measured fifty-five feet in length, and twenty-two in at the butt end. Such of the yew, as was not cut, or wind-shaken, was cut in made into beautiful furniture, and for the remainder, as well as for the oak and p ready demand for forming flood gates, for building and for farming use. Upon the at the bottom of the outfall drains we found the dash, and lid, of an hand chur crane necked brass spur, with a rowel a full inch in diameter.

The outfall drain being completed and proper sluices erected to give a command the next step was to cut foot drains, or drains one foot wide and one spit deep, at and parallel with the outfall drain; thereby dividing the whole surface of the bog of four plantation acres each. The following year these drains were deepened three feet wide, and two and a half feet deep. The result was, that within two time the outfall drain was began, the whole mass of bog from actual and accurate subsided and shrunk downwards, four feet in perpendicular height; and from in which with much difficulty, I could step from one hassock to another, without sinking up to my middle, it became so far consolidated and compact, that in the spring following, roamed over and browsed upon it with ease and perfect security.

The *Mosses of Scotland* seem to be derived from an accidental and similar cause. *Swamps of America*, though evidently of a later date, are chiefly to be imputed to origin. In confirmation of this latter opinion, I must solicit the indulgence of the I relate the amount of my observations as they regard this production of nature in uncultivated country.

Many of the swamps of America (and some of considerable extent) are produced ingenious and unparalleled labours of the half reasoning beaver. At the back of Frankford in Kentucky (which is now the seat of the government of that flourishing state) I was present at the cutting of a beaver dam, the heart of which, consisted of locust \* tree, which had been cut, and thrown down by these animals, across the principal drains which discharged the waters of that plain, and of the higher Kentucke river. About two hundred acres of land were immediately recovered; which was composed of putrid vegetable matter or fen mould, clear from wood, and ploughs. It was in the early settlement of that town, and before any idea was entertained of being made the seat of the present government, that I was called upon, in conjunction with a person, to value this reclaimed land; and although the current price in the neighbourhood

\* The locusts of America, are the acacia of this country. The honey locust derives its name from that which envelops the seed, which is inclosed in pods about nine inches long. The black locust is a tree so strait and lofty: It encourages every species of vegetation under its shade. The honey locust is spiky up the whole of the stem, and to its extreme branches. The black locust has also thorns, but the timber of both is extremely hard and durable; but that of the black locust is preferred, whether for the open air, or for posts in fencing.

red land of the first rate quality did not exceed one guinea per acre, we readily sold for five pounds per acre for the reclaimed beaver pond. On the rich bottom margin of the Ohio river, and all the river bottoms throughout the whole extensive country, forsaken beaver ponds and these still inhabited by that sagacious animal in length, and very wide, are gradually assuming the appearance and nature of a lake by cutting away the beaver dams, and opening the natural passage for the water, and easily reclaimed; and prove in a country like that (where the clearing of land is an expensive, tedious, and Herculean labour) an immediate convenience of considerable value to the owners, and occupiers of them. The shades of the Alleghany Mountain, the buffalo swamp in the low country, and the dismal swamp in Virginia, all seem to owe their origin to an accumulation of their natural waters, but for which cause alone, their superior elevation would be very ages ago, like the adjacent country.

In view of the operations of nature in the silent and solitary courses, is it not fair to suppose that a cause compared with the magnitude of the effect (assisted by negligence, and an operation of the ocean not possible to be controlled) may have produced the level of the country now covered by fens? The appearance of the effects generally seen on the timber that has fallen, or the stumps that are found rooted in the ground, as under the bogs of Ireland; still a sudden and violent tempest, or some other cause, might have thrown down so many trees into the natural water courses, and at the time of great floods, resist the floating of the drift wood and rack, descending in great quantities from an high and woodland country, the obstruction remaining for a few days only, would acquire additional strength from the deposition of mud and sediment brought up, by the succeeding tides, and lodge in the obstruction thus formed in the principal river. In a few years a bank of composition would be thus accumulated, and the land waters being thus arrested in their course, must of necessity be constantly increasing, and in a short time from one extent to another, the whole level of the country which is now occupied by the fens. At what time it happened I believe there is neither tradition or historical record to afford us any probable conjecture; I suppose it to have happened in the time of the Danes, by whom this part of the country was infested; but certain it is, that it must have been in that situation for many ages, a vast quantity of vegetable matter, which now composes the body of the fens, could not have been produced, though it has evidently arisen from the same general cause.

In some places from the Ohio River, at the mouth of the Muskingham River, when it is about eight hundred years old, the water runs to a perpendicular height in about five days; the top of the fresh ran at the rate of about five miles per hour, and the whole surface of the river, during the greater part of the time, was covered with drift wood and rack. A dam, formed by an arrestment of this drift wood and rack, and corroborated afterwards by the tides depositing a sediment at the foot of such dam, must throw the whole country above in the same manner, and account for the number of mouths the Mississippi has at this time.



or from the improper treatment it has since received; whereas the new embankment on the opposite and east side of Kenderley's cut in the same parish, was greedily sought after after the bank was raised at thirty shillings the acre.

I now proceed to a farther investigation of the nature of the fens; in which I shall endeavour to account for their most singular phenomena.

The moisture are inseparably connected with the process of putrefaction; and it is in this substance whatever can be brought to operate as a direct manure and food for plants, "as the putrid ferment, and is rendered completely soluble in water, that being the only nutriment can be conveyed to the roots of vegetables." We find the surface of the fens, daily exposed to the influence of the summer heats, consists of completely decomposed vegetables; and regarding the soil only, it is impossible to trace in it any vestiges of the substances that composed it. The sub-stratum, or turf-moor next below the decomposition of vegetable bodies, but in a less perfect state of rottenness or decomposition, very plainly be seen the original form and substance of its component parts. Below this lying on the natural and antient surface of the country, is another stratum of vegetable matter, commonly called bears muck, + This stratum retains every appearance of what it was when giving its life and colour, being an assemblage of the roots, leaves and stems of various plants; which has undergone but little alteration since the remote period of its deposition; because it has been beyond the reach of the essential principle of heat to combine with oxygen and air in effecting its natural and necessary dissolution.

It prevails very generally through this country, that the turf-moor which is raised, has a quality of growing and of reproducing itself in a very short time. This is proved from a well known fact, that when turf pits are made, they will in a few years be capable of affording an equal quantity of a similar substance fit for the purpose. In opening a turf pit, it is usually found necessary to throw off about eighteen inches of the top stratum, which is always cast into the last made pit, by the side of which the new

farmer says, "If I apply my dung in this state, it is eaten by the land in the course of one year." It is true, some of the rotten dung will probably remain after that time; but it does not follow that its virtue is exhausted; it cannot be found in the same form in which it was spread upon the land. The process of its decomposition is unseen by the human eye, and the existence of it in the soil is only to be estimated from its effects. In cold, and compact clay, long dung may operate in fertilizing the soil, by rendering it more admissible to the influence of the sun, frost, air, and dew; but it can never operate as a DIRECT MANURE AND FOOD, till it is rendered capable of combining with water. Top dressings which contain a fixed Alkali (which is necessary for the union of oil with water) manure, or oleagenous matter, or a compound of the two, though not cognizable to our senses, be obedient to the same laws.

The substance is cut into large sods, about twice the size of a common brick, and forms the red spongy peat, which is sold in large towns for the purpose of lighting fires.

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*its natural channel and forcing its waters into the Lynn or lesser Ouze, through the cut made from Littleport Chair to Priests Houses.*

ghlands in Suffolk (between the Milde-hall and Brandon Rivers) to the east of Well, Enneth, and thence to the sea; a positive dividing ground exists, formed by nature, strongly marked and distinctly to be seen between the waters of the Lynn and the Ouze. The hanging level or natural inclination of the country on the north side of the ground, draw the waters off to sea through the lesser Ouze to the outfall; on the south side of it draws them off to the sea through the greater Ouze to the outfall. *To the cutting through this divided ground (before mentioned) in order to connect the greater into the lesser Ouze, are all the evils of the south and middle levels of the country below, solely and originally to be ascribed.* At this time the bed of the river now stand, was at least thirteen feet below the general surface of the country; and then it was, that by the free action and re-action of the tides, the waters in the haven of Lynn, ascended into the Stoke and Brandon Rivers, and into the Ouze, which nature had wisely appropriated to be discharged through that outfall; forming the Ouze to one gradually inclined plain, *from the junction of the principal river in the low country, to the level of the ocean very near or in the harbour of Lynn.* That the province of Marshland was recovered from the sea; and all the country which belonged to the drainage of the Lynn surge, was effectually drained, and made for ever grounds.

Reacting this disposition of nature, by forcing a greater quantity of water into the river, and discharging it into the sea during the time of ebb; necessarily occasioned the high-land and low-land to over-ride all those, which during the time of ebb, would naturally have drained the river, and gave the waters of Buckingham and Bedford an exit into the sea, in preference to which lay inundating the country, within a few miles of their natural outfall. — At present, are all the lower parts of the country bordering upon the Lynn, the country above Denver sluices, Downham, Marshland, and Bardolph fens, except the important of many other melancholy examples and evidences of it. In the high country, the consequences of this measure seems to have been severely experienced exposed to the unembarked waters of the old Ouze, between Hermitage and Harlow. The old Bedford river was then cut, from Erith to Sallers Lode, as a flaker to the Ouze country through which the Ouze flowed, from Erith to Ely. The Ouze waters, a great part of them descended through the old Bedford river in a straight line to the Lynn Ouze. But as that work was judge insufficient and defective, the cutting of one hundred foot river, was determined upon; and sluices were erected at Hermitage, so that all the waters of old Ouze from Erith, (through the one hundred foot) into the Ouze, but that river not having sufficient capacity to utter them to sea, they reverted to the Stoke, and Brandon rivers, drowning the whole of that country, and finally urging

was laid. This measure has not only defeated the purpose it was designed to be the unfortunate cause of a body of sand and sea sediment being deposited at Lynn Ouze, at least eight feet deep at Denver sluices; and only terminating at the mouth of the Lynn Channel (or low water mark at sea. A calm and candid mind, the necessity of duly considering the probable effects of the laws of nature, in cases when nature appears experimentally to have been overcome. By great and continued exertion the strength and ingenuity of man may overcome the evil which otherwise would immediately accrue from a counter-action of nature. The energy is not only feeble, but soon expires; whereas that of nature is only from the operation of incidental obstacles, as it is unalterable in its effects from the beginning of time, till time shall be no more.

From a due consideration of the obstacles which will appear at this time, it has long been considered the principal outfalling drain to the middle and south levels, and is surely reasonable to direct our attention to the general inclination of the land towards the sea, and to what has all along been pointed out by nature as the main outlet of the middle and south levels, and see if some means cannot yet be found to alter the general course of the ancient and voluntary passage of the waters through the channel of Wisbeach to the sea. To begin this enquiry we must take our level from the water mark at sea; and trace the effect of the tidal waters as they regulate the land waters, through the channels of Lynn and Wisbeach. On this occasion I have been as accurate as the time and means in my power would enable me to be, but necessity I have been under of resorting to the materials of art rather than of nature to establish my facts upon.

The flowing of the tide above the haven of Lynn, at stated distances of time. I was moored at the entrance of the Lynn and Wisbeach channels, and the following is a summary of the facts, more than any scientific authority, however I be depended upon. Such data however as I have been able to collect of the tides, will be found in the following tide tables.



BLE of the flowing of the tide on the 19th day of November, 1793, in  
 or of Lynn, and at the mouth of the Lynn Channel, two miles below  
 Sands, at the White or Flag Buoy, distant about fourteen miles on a fl  
 low the Harbour of Lynn.

the Mouth of the Lynn Channel.

In the Harbour of Lynn

Atch.	Depth of wa- ter in which we anchored.		Rife.		Time.	Rife.	
	Fet.	Inch.	Fet.	Inch.		Fet.	Inch.
	19	6	in which we anchored at dead low water.				
10	21	4	1	10			
	25	2	5	8			
	28		8	6			
30	31		11	6			
	33	8	13	2	Young flood at Lynn		
30	36	3	16	9	At 5	dead low water, or the fir	
	38		19	6	30	6	6 of th
30	39	6	20	6	6	2	3
	40		20	6	7	1	5
13	40	6	21		7	32	11
	41		21	6	7	40	Ebb b
a flow of		21	6		In 2	32	14
							6 flow

The above observations at the Flag Buoy in the Chops of the Lynn Channel, were made by Mr. L. SEAR, Mr. MITCHELL, (master Pilot) and the AURORA; and those in the Harbour of Lynn by Mr. THOMAS FRANKS, and Mr. WILLIAM DUNHAM; a gentle breeze blowing from the south-east the whole time.

to explain in some measure the phenomenon that appears from the within tide tables, of the ebb of Lynn, being noticed at the same point of time, it was felt in the mouth of the Lynn Channel, to a straight line nearer to the Sea, we must recur to the set of the tides in the Bay which is formed by Lincolnshire and Norfolk. The flood tide makes in Brancaster Bay, on the Coast of Norfolk, near, and off Hunstant one hour sooner than at the Flag or White Buoy, which is placed in the entrance of the Lynn Channel, and of course returns in the same proportion of time before it is high water in the mouth of the Lynn Channel. During the last hour's flood at the Flag Buoy, the tide off Hunstant sets eastwardly, and towards the Lincolnshire and Norfolk shore; in consequence of which, the water along shore in the Old Eastern Channel, and Nottingham point, is affected; and Ebb in the Harbour of Lynn is felt sooner, than was from the Harbour of Lynn, being fourteen miles farther from the Ocean, than the Mouth of the Channel. At the time these observations were made, the Terror Sands which are about two miles above the Flag Buoy, was more than four feet depth upon them.

**TABLE** of the flowing of one and the same tide on the 3d day of December, 1793, in the town of Wilbeach; also, at Gunthorpe Sluice, about six miles below the town; also on the north side of the Bar Buoy, about eighteen miles below the town, being in the entrance of Wilbeach Channel; and also, in the Harbour of Lynn.

On the North Side of the Bar Buoy.				At Gunthorpe Sluice.				In the Town of Wisbeach.				In the Harbour of Lynn.			
Time.		Rise.		Time.		Rise.		Time.		Rise.		Time.		Rise.	
Hours.	Min.	Feet.	Inches.	Hours.	Min.	Feet.	Inches.	Hours.	Min.	Feet.	Inches.	Hours.	Min.	Feet.	Inches.
At 12 { In which we anchored at dead low water.															
2	17	9	1												
2	30	16	4												
3	19	4	7												
3	30	22	10												
4	24	6	12												
4	30	27	6												
5	31	19													
5	25	32	20												
5	30	32	6												
6	33	21													
6	30	33	3												
6	30	33	3												
6	40	32	6												
At 12 { In which we anchored at dead low water.				At 6:20 the first flow of the tide.				At 6:20 the first flow of the tide.				At 4:12 dead low water, or the first flow of the tide.			
				5:25 the first flow of the tide				6:50 11 9 3				44 2 5 8			
				5:55 4 2				7:20 2 6 3				51 2 3 10			
				6:25 6				7:50 3 5 3				54 2 2 6			
				6:55 7				8 3 6 3				61 2 1 3			
				In 1:35 7 rise or flow of water.				In 2:38 14 rise or flow of the water.							

preceding tables the following summary may be drawn :

The tide at the mouth of the Lynn channel has flowed three hours, and has there risen two inches, it is young flood in the harbour of Lynn. But as it flows in the mouth of the channel, two hours and twenty minutes longer, the whole flow or rise of the water is twenty-one feet six inches, in five hours and twenty minutes of time ; while the water in the harbour of Lynn in two hours and thirty-two minutes, is fourteen feet ; and (adjusting the difference between the watches) at forty minutes past seven, and is first noticed as well in the harbour of Lynn, as in the mouth of the channel, is plain, allowing a small effect for the operation of the tide in the eastern channel (explained.) There is an absolute declivity of seven feet perpendicular height, between the high water mark in the entrance of Lynn Channel, and the low water mark in the harbour of Lynn, to overcome which declivity and the obstructions upon it, in three hours of time, a pressure of water from the ocean of thirteen feet two inches perpendicular pressure is required.

When the flood tide has been made four hours and five minutes at the mouth of the channel, it has there risen twenty feet, and at this time it is young flood at Gunthrope. It flows in the mouth of the Wisbeach channel fifty-five minutes longer, making in five hours, and the whole flow or rise of the water, is twenty-one feet three inches. When first flood at *Gunthrope sluice*, to high water there, is one hour and 35 minutes ; and the tide flows or rises seven feet in perpendicular height : from whence it is plain that the declivity of fourteen feet three inches, from the level of the sea at low water, to the high water at *Gunthrope sluice*. Again, when the water has flowed five hours in the mouth of the channel, and has there risen twenty-one feet three inches, the first flood is perceived in the town of Wisbeach. At this time it is high water at sea ; though from the moon's position, the water is continued flowing in the town for one hour and forty minutes longer, and rises three feet six inches three tenths. From hence it is also plain that there is a declivity of seventeen feet eight inches seven tenths between the low water at sea, and the high water in the port of Wisbeach ; to overcome which declivity, and the obstructions upon it, in three hours of time, a pressure of water from the ocean of twenty-one feet three inches perpendicular pressure is required. It is also to be remarked, that when the water has flowed in the mouth of the Wisbeach channel two hours and fifty-two minutes, and risen thirteen feet nine inches, it is flood in the harbour of Lynn, it continues to flow two hours and eight minutes longer in the mouth of the Wisbeach channel, where the whole flow or rise of the water is twenty-one feet three inches. In the harbour of Lynn the same tide flows two hours and thirty-eight minutes, and rises fourteen feet. From hence it follows that there is a declivity of three inches more between the high water in the harbour of Lynn and the mouth of the Wisbeach channel, than between the high water in the mouth of the Lynn channel ; or in other words, that the low water in the mouth of the Wisbeach channel is three inches lower than that in the mouth of the channel of Lynn, as far as the low water mark at sea.

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the surface, an infinitely fine sea sand or silt, mixed with ouze or sea clay; at the surface, a compact and firmer substance, but still mixed with silt; at three feet, the same, but touching upon a black dry sea mud, with a small mixture of silt.

2. The surface and substrata thus far, when wet having a greasy appearance, and to the touch; the only sure way to discover the presence of the silt or fine sea sand, was to put a small portion into the mouth when it will be immediately detected.

At four feet, the same kind of mud, but rather softer continued, and here too was found a grey ouze with a small mixture of fine silt; at six feet, nearly the same, a black soft sea mud (through which the boring rods with the strength of a single person could be pushed a foot and eighteen inches at a time; at ten feet, a very soft black mud, offensive to the smell, and containing a portion of very fine silt; at twelve feet, the same; at fourteen feet, little or no difference; at fifteen feet, vegetable matter or moor appeared, which is uncertain.

Being on the north side of the north sea bank in the land of Mr. Carey, is a ploughed field.

At the surface, an hazel coloured greasy soil, with a mixture of silt; at two feet, a brown soil with a mixture of silt; at three feet, a dry firm and compact loam, with a mixture of silt; at four feet, a wet soft loam with silt; at six feet, a black soft sea mud (which was pushed by the boring rods, as the black sea mud at eight feet in the first boring;) at eight feet, the same; at nine feet, a putrid vegetable matter or moor, very dry and offering to the bite of the augur; at ten feet, the same; at eleven feet, the same, with the appearance of rotten wood; at thirteen feet, vegetable matter but less firm; at fifteen feet, with rotten wood.

III. Being on the south side of the north sea bank in Mr. Carey's land.

At the surface, an hazel coloured loam, or gentle clay, with a mixture of vegetable matter; at two feet, a strong dry loam with silt; at four feet, a similar substance, but softer; at six feet, a dry vegetable matter, or moor; at eight feet, the same; at ten feet, a soft soil, with a bluish colour (which I expected to have found the natural and original surface;) at twelve feet, much the same as the above, but rather softer. By digging we reached a depth of sixteen feet and a half from the surface of this level, when we pointed in finding a white sea sand, or coarse quick silt.

IV. Being about eighty yards distant, and below the river bank at Eau-brink, at the common, about the middle of the proposed cut, and by the south side of Mr. Carey's wheat field, marked thus. ✱



part of the question as to the construction of the cut ; but I shall say a few words on the expediency of this work being executed.

It is universally agreed by all writers on mechanics, that bodies in motion operate with the greatest violence when they strike another at right angles ; and that their power diminishes in proportion to the obliquity of their stroke. This being the case, and seeing that the town of Lynn is situated on a point of sand, and of compressed sea mud ; I have no hesitation in pronouncing that the destruction of it and of its present harbour, were the proposed cut to strike it in the same direction with that of the present river above the town ; but as this is not the case from the proposed cut, no danger is to be apprehended on that score. What is the cause of the destructive end at present, is owing, I conceive, to the meandering of the river, which the tidal and fresh waters now make among the loose sands, in the neighbourhood of the town : where, after the first quarters ebb, the sands above the town are exposed to themselves. At this time, the ebb begins to set with a powerful and incoherent current, in which a sharp recoil in the returning waters is produced ; carrying the channel from its present position, directly across the Haven to the west side, that is towards Old Lynn.

Supposing, as before, the banks strong and permanently made.

The present harbour of Lynn forms the segment of a circle of about twenty degrees, which extends along the walls of the upper part of the town the ships are moored, and receive and discharge their cargoes, and from its contiguity to the town, the greatest part of the shipping business of this port is done here. Lying under the shelter of an arch, the vessels are defended against the force of the flood tides, by the town acting as a pier, which shoots the flood tide, in a straight line through the Haven above ; at which time so powerful is its operation, that an eddy is always produced in the Haven, and at times, a counter-stream (called the *trains*) of such violence, as to smothering of the vessels down stream, whilst the water is swelling or flowing in at the rate of twelve and fourteen feet in the hour, directing its stream upwards. The removal of the present channel into a line with the proposed cut, the present shelter of the ships would be lost, and the shelter which is now afforded to the shipping by the town from easterly winds, should to a certain degree be lost ; the shipping would then be exposed to the fury of the flood tide, on the one hand, and to the fury of the flood tide, on the other, to the undiverted flood waters, strengthened by a southerly wind, and descending in a torrent down the Haven, into, and through the Haven of Lynn. What effect this might have in addition to the distance to which the harbour may then be removed from the wharfs and ground, I leave to those who are acquainted with the shipping and lighterage business of the port. I can have no hesitation in forming an opinion : for should the water be let into the channel which now forms the harbour of Lynn, considering the increased violence with

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in it; and finally find its nearest way to sea, and in its consequences, bring deep (level of the ocean) nearer to the Port of Lynn than it is at present.

But, however, from the whole of these considerations, ought to be regarded more the consequences, than the certain effects of the proposed measure. The level from the upper end of the Haven of Lynn, to the ascending line of subsided waters, discharging into the Lynn Ouze above Eau-brink, ~~will~~ produce these advantages as the water is thus lowered in all these rivers, lodes, and leading drains at present established, will have a less head to work against; and as the soakage from the fen banks will be considerably reduced, their effect in lifting the water out of the districts, will be more immediate and certain. By lowering the water in the city may be enlarged, and by fresh digging, their bottoms will approach nearer the fens, when either the gault, or gravel, will furnish a greater, more constant supply of water during the dry season of summer, than at present; and the drains will form a more effectual and permanent fence.

And of which the outfall through the Channel of Wisbeach, holds out at this time the prospect of the fens, and how that advantage may be prudently improved, come next to be considered.

From the preceding tide tables, that in the distance of twelve miles, from the entrance of the Wisbeach Channel to Gunthorpe Sluice, there now exists an average depth of fourteen feet; but as there is a constant depth of from seven to ten fathoms between the Bar Buoy and Eye, so on a more minute inquiry, the obstruction to the flow of water within the distance of eight or nine miles from Gunthorpe Sluice, rather than ten, is set forth in the Journal of observations.

There are at a loss for an accurate data which I wished to have derived from the flow of water above the Haven of Lynn to Denver Sluices, at the time I was moored in the Haven of Lynn and Wisbeach Channels; for certain I am, (although I am not prepared to say so) when the tide flows seven feet high at Gunthorpe Sluice, it does not flow, or at least not to any great depth of water, at Denver Sluices. This assertion being granted, by inference it follows that the low water mark at Denver Sluice is higher than the low water mark at Gunthorpe Sluice, a fact of considerable moment, and which ought to be accurately ascertained, and brought to its full weight and consideration.

The waters of the North Level, at this time descend from Gunthorpe Sluice into the Haven of Lynn with considerable rapidity; whilst in the most calamitous times, those of the middle and south fens, are frequently locked up at Denver Sluices and Salter's Lode, for many weeks together, by the power of the tides and superior pressure of high-land waters. The passage from Eau-brink to the Haven of Lynn, presents to us a probability of low



And this strongly enforces the necessity of taking up the Outwell Canal Scheme and extended bottom, combining *navigation with drainage*; which (as I before mention of this nature, should ever be regarded as one and the same thing.

### SECT. III.

#### *Of the Internal Works and District Drainage of the Fens.*

WHEN the dictates of nature are pursued, as in the instance of recovering the waters of the north level of the fen, through the channel of Wisbeach, the measures speak loudly for themselves. Additional works, are, however yet necessary of that excellent drainage; and so far as it is possible to effect them through the aid and exertion of the gentlemen who have the care of the principal estates on both sides of Moreton's tern, so far I am persuaded, that their unwearied diligence will not suffer them to remain neglected.

The obstructions, which for ages have existed in the town of Wisbeach, to the outlet of the Nene and great Ouse below to the sea, were a principal cause of the miseries of that outfall; and are at this time a very great hindrance to the drainage of Wisbeach north and south side, and to the present navigation of the Wisbeach river. The removal of the obstructions from above Guyhirn down *through it*, and continuing the river below the town as straight as conveniently possible, to the upper end of the sea, must have a very important effect, upon the internal drainage of the fens; the present meandrings of the Wisbeach river would be cut off, and the ground would be reduced to a more evenly inclined plain from Peterborough to the eye at sea.

Another work of considerable moment proper in this quarter, is, the forming of a new brook; not exceeding three feet in height, at a proper distance from, and parallel to the navigable river from Guyhirn to Peterborough. The effects of this in the future would be, That the spring tides would be restrained from spreading, as they now do over part of the wash-way; and the small freshes from the high-land country, above, and confined in their descent to the channel of the present river; thereby effectually, and at the same time preventing the deposition of sediment, the overflowings of the wash-way, and the consequent reduction of its co-

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melancholy prefiges are verified. The waters being already lifted to the height which can force them on, are thus prevented from reverting again towards Whittlesea (as in calm times they do) to the temporary relief of the fens, but to the utter destruction of the skirting lands which border on upon the Highland country.

The upland waters of Berry, Biggin, Word Walton, Sautre, Conington, Glatton, and others, which formerly flowed into Ugg, and Ramsey Meres, and thence were carried off by the Nene river, past Binwick to the Wisbeach outfall, have been diverted to a new and extraordinary course by the forty foot river or Vermuden's drain, into which they are collected, and through Welches dam, into the Old Bedford river. Upon this latter river, at Salter's Lode, there are nine powerful engines at this time employed in lifting the waters out of their respective districts; its doors or flood gates have now (soth it is a fact) a five feet depth of silt and sediment lodged against them; and should the high water come to fill the wash or reservoir as full as it is at present, the presumption is, that the force of that water from the mouth of the one hundred foot level above into the forty foot level, will be so great, as to enable them to keep them shut for some time longer. These engines have now an head of water to work against above the thresholds of their water ways, and the utmost that the most powerful of them can do with effect, is to work against the level of the water in the wheel, and as these mills are generally pitched against a four feet head. If it were possible to enable them to work against this head, the river will then be full to the

top, and the discharge of this water into the Ouze, is rendered impossible from the superabundance of silt and water pressing against the doors of the Old Bedford River; these will not be lifted, till the water in the Old Bedford over-rides that in the forty feet level, at Welches' Dam, will then, of course be shut; and the waters that are thus collected in the Old Bedford and forty feet rivers, from the spunginess of their banks will be forced through them, and spreading again into and through the same districts, overflow the lands which have before been raised; this was a consequence most severely experienced in the latter part of last winter, and an evil which seriously threatens the country at this time, in the middle level, so far as the influence of this pernicious and extensive system is concerned, and it is wide indeed, exhibits a melancholy proof of the truth of this assertion.

There is no other thing in nature more preposterous than forcing the waters of the Nene, Benwick, and Ramsey Meres, along the circuituous course they are now obliged to take, at Salter's Lode; there to remain locked up on an higher level, than when they were first collected, and then to have had a rapid and tumbling fall into the sea from Gunthorpe Sluice.

A canal has been laid under the bed of the Old Bedford River (by an ingenious Gentleman) to drain a part of the embanked washway lying between the

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wash bank, recommended to be erected against Moreton's leame. Great care in future, that by planting the flaves with oziars, the best materials are not lost prime bank, and also, that the oziars do not produce a current against the course with the gangs passing up and down, will wear away the foreland, and weaken the prime bank, as is plainly the case now, and where it is much to be lamented.

Under the present system of draining, little, in my humble opinion, can be done for the drainage of the country above Denver sluice, except cleansing out St. John's Eau, that drain to act as a flaker to the Ouze, above Denver sluices, when the water rises to a certain height so as to press with a threatening and destructive head upon the country. It is, that the inhabitants of that country implore relief, and it is at that time of year, when the Eau, is required by them to come in aid of the distresses, of which, at this time they complain, and which a timely and well regulated discharge of the highest water level through St. John's Eau, would completely afford. And this surely might be done without injury to navigation, or the consequences which generally attend the dividing of the twelve or eighteen inches of water, which would thus be conveyed through the surface water only, and such as would go off in the first quarters ebb, so that it would be but little felt between Denver sluices and the mouth of St. John's Eau.

Thus have I collected together, in the best manner my leisure and ability will permit, observations on the nature and drainage of the fens, as came within my view. In a short time I have been engaged in the survey. According to the best of my judgment, the following conclusions are fairly to be drawn from them :

I. That the Eau-brink cut, must have a tendency to improve the navigation and the drainage of the country, which properly belongs to it.

II. That its good effects cannot possibly extend to the complete and effectual raising of the middle and south levels of the fens; and

III. That this relief is only to be obtained by following the laws of nature, and the efforts she uniformly makes to relieve herself; and where a complete and effectual raising of the middle and south levels of the fens, is yet to be obtained through the channel of the Eau-brink cut.

Hoop-Inn, Cambridge.  
February 1, 1794.

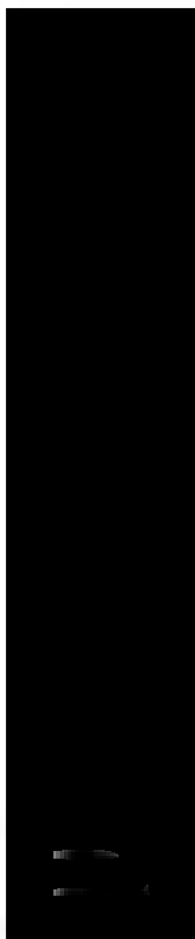
CHARLES

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	24	for brook read bank
23	16	for evne read even
	20	for when read where
	10	from the bottom, for in
24	4	dele on
	5	for word read wood
	14	for level read river
	8	from the bottom, for e
25	4	for lifes water read if
	5	for French read pref
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26	5	for Messal read Mepa



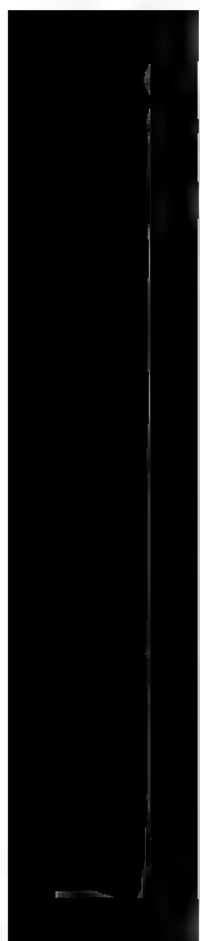




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GENERAL VIEW  
OF THE  
AGRICULTURE  
IN THE COUNTY OF  
*RUTLAND.*

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## ERRATA.

- Page 11, line 22, *Place a period after good. Begin a new sentence with the word Upon Dele period and substitute a comma after soils,*
- Page 14, line 24, *after clover insert and rye grafs*
- Page 17, line 10, *dele nine*
- Page 20, line 21, *for Drawing read Draining*
- Page 24, line 15, *after adopted. substitute a comma, and connect the three following lines, with the first paragraph, beginning a new paragraph with the words I shall*

GENERAL VIEW  
OF THE  
AGRICULTURE  
IN THE COUNTY OF  
*RUTLAND,*

WITH OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY  
JOHN CRUTCHLEY,  
*Of BURLEY, in the County of* **RUTLAND.**

*Ed. Crut.*  
DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE  
INTERNAL IMPROVEMENT.

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LONDON:  
PRINTED BY W. SMITH.  
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no.4

## TO THE READER.

*IT is requested, that this Paper, may be returned to the Board of Agriculture, at its Office in London, with additional remarks and observations, which may occur on the subject, written in the margin, as soon as may be convenient.*

*It is hardly necessary to add, that this Report is presented, printed and circulated, for the purpose merely of procuring farther information, respecting the Husbandry of the district, and of enabling every one, to contribute his share to the improvement of the country.*

*The Board has adopted the same plan, in regard to the other Counties in the united Kingdom; and will continue to give every assistance in its power, to any person, who may be desirous of improving his breed of Cattle, Sheep, &c. or trying any useful experiments in husbandry.*

LONDON, FEBRUARY, 1794.



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## INTRODUCTION.

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**T**HE county of Rutland is the smallest in England, the circumference being only about forty-eight miles. It contains five hundreds, two market towns, and fifty-three parishes, four hamlets, one hundred and five thousand acres, three thousand two hundred and sixty houses, and about twenty thousand inhabitants. Nearly one third is subject to tithes, which are usually compounded for. Upon inclosures, land is generally allotted in lieu of tithes. The common proportion now given is one-fifth of the arable land and one-ninth of the greenward.

*Surface.*—The face of the county, is much diversified, by small and gently rising hills, which run east and west, with vallies intervening about half a mile wide.

*Soil.*—The soil is generally speaking fertile. It varies very much, the east and south east parts, through which the great north road runs, being in general of a shallow staple, upon limestone rock, with a small intermixture of cold woodland clayey soil, and the other parts of the county, being made up of a strong loam, of red land, and of a cold woodland clay; the red land, is a rich sandy loam intermixed with keal; iron stone is also found amongst it; this soil is esteemed most fertile; the under stratum of the whole county, at different depths, is a very strong blue clay. It is well watered by rivulets; at present there is no navigable river or canal in the county, but an Act passed last Sessions of Parliament for extending.



ending the Melton Mowbray canal to Oakham, the centre of the county, which it is hoped will be of great benefit to it ; and if carried to Stamford would be of the greatest advantage, not only to this county, but to the community at large, by uniting the Trent with the Welland, which runs through all the fen county to Boston, and would be the best means of supplying the manufacturing part of the kingdom with corn.

*State of Farms.*—The farms are not in general very large ; greater in the inclosures than in the uninclosed parishes, but not rising to the great amount they do in some counties ; three or four hundred pounds a year is esteemed a large farm ; there are a great many very small ones, several gentlemen farm part, and some the whole of their land, and certainly may be considered as the best managers in the county. There are also a great many cottagers, by which I mean, occupiers of small portions of land just sufficient to enable them to keep one or two cows, without preventing them from working constantly as day laborers ; this custom does not prevail in all the parishes, but wherever it does, the benefit of it is felt by the cottagers themselves in the greatest degree, and by the proprietors and occupiers of the lands in the lowness of the poors rates, and in the industry and good order of that description of laborers. These small portions of land are generally well managed, and made the most of.

*Modes of Occupation.*—The varieties of soil before-mentioned, and part of the county being inclosed, and part open fields, do of course cause different modes of culture to be pursued ; they may be considered in the following order :

*Arable open Field Land.*—All the open fields are under the old course of two crops and a fallow ; upon most of the light soils, a great improvement has taken place within these

few years, by turnips being cultivated upon part of the fallows, and fed off upon the ground by sheep, that part is then sown with barley, and the dead fallows with wheat; pease and beans intermixed, are usually the second crop upon the clayey soils, and pease alone upon the lighter soils; sometimes white corn is sown after wheat instead of beans or pease, but this is reckoned bad management.

In some open fields in the eastern part of the county, the following is the course of crops: After fallows, barley, and broad clover sown with it; the second year, the clover is mown; the third year (being fallow) the clover is fed with sheep, then it is broken up and sown with wheat.

The manure is always laid upon the fallows, the fallows are never stirred till spring, winter ploughing being deemed hurtful to the land; the whole is sown broad cast. No crop but the turnips, is ever hoed, the red lammas is the species of wheat cultivated; the crops, after the fallows, are generally good and clean, the second crop very much otherwise, particularly upon the light soils.

Long beam swing ploughs, with four or five horses in length, are in common practice.

*Improvements therein.*—While property lies intermixed as it does in the open fields, and the practice of common stocking at particular times prevails, few improvements can be reasonably expected; the use of better constructed implements of husbandry would certainly be of service, and I am happy to say, that the light wheel ploughs begin to be used, the better working of the fallows by winter ploughing, and drilling and hoeing, or even hoeing the bean and pease crops, would, I should suppose, be found of great service; for good land fallowed once in three years, ought certainly (were it properly managed) to give cleaner and better crops, than is generally seen here: As to the great improvements of draining and varying the crops, by sowing clover and grass seeds,  
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they cannot be expected, and upon the whole, the only improvement which it is worth while to lay any stress upon, is that of an inclosure.

2. *Arable Inclosed Land.*—This is almost entirely confined to the light soils, grass lands meant to be improved by ploughing for a few years after draining, and now and then a small piece of land near a grazier's house for the convenience of straw, being the only strong land that is in tillage. Of the light soils there are two sorts, the red loam, and the limestone soil ; upon the former, two different modes of culture are adopted ; the one according to the Norfolk rotation.

The first year turnips ;

The second year barley, sown down with clover ;

The third, clover mown ;

And the fourth year wheat upon the clover lay. The other course is, on breaking up clover, to have two crops of spring corn ; the third year turnips, the fourth year barley, and sown down with rye grass and clover, and in that state the land is kept for three or four or more years, mowing it seldom, but being grazed principally by sheep, then broke up and sown as before. The turnips are in all cases fed off upon the ground by sheep. Both these methods have their advocates. In the former, excellent crops of wheat are procured. In the latter, a great quantity of sheep-stock is kept, and the crops of spring corn are very large. The wheat is in great repute, being sold into Leicestershire at an advanced price for seed. The sort, the red lammas : other species of wheat are but little known, and consequently not so much esteemed. Potatoes have been much cultivated of late years, and some having been used raw for cattle, are thought to answer as well as turnips ; all the crops are generally abundant and the clover and grasses flourish remarkably well, particularly where lime has been used ; this manure has been introduced of late years, and the use of it is

now well understood, it being always applied to the fallows, precedes the sowing of the grasses; eighty bushels of lime to an acre is the usual quantity. Light single wheel and two furrow ploughs are much used upon this sort of land, and two horses frequently work abreast without a driver.

Upon the limestone soils, two crops are generally taken before the fallows. The first, white corn; the second, pease; the turnips on the fallows are eaten off on the ground; then spring corn and broad clover, which lays one year. Some farmers (whom I cannot call good ones) take two crops of white corn before the fallows: Saintfoin is cultivated with great success, and lucerne flourishes well, but the latter is only sown by a few gentlemen, none by farmers; this Limestone land as well as the red land, produces good barley and pease; every crop is sown broad cast; drilling is scarcely known, and no crops are hoed but turnips.

*Improvements therein.*—A great deal of red land has been much improved by draining, and the use of lime, which I am happy to say increases so much, that it is hoped soon to become the universal practice. These two may be considered as the principal improvements to be recommended; the general management of the red land is very good, upon the limestone soils. The banishing entirely two white crops in succession, and liming and draining these lands, will be found great improvements, wherever they have been adopted, it has been found well to repay the expence. Where pease or beans are sown, they should certainly be hoed, or what would be much better, drilled and hoed.

I cannot pretend to form a calculation of the crops in the open field lands, as they are very uncertain, it is more easy to guess at them in the inclosed lands, and I should think upon the *red land* four quarters of wheat, four and half of barley, eight of oats, thirty-five of potatoes, three and half of pease, and five of beans, about the average quantity per

acre ; and upon the *lime-stone* soil, three quarters of wheat, three and half of barley, four and half of oats, and two and half of pease upon an acre. About two bushels of wheat, two and half of barley, three of pease, four of oats, three of beans, are commonly sown upon an acre ; oats are generally sown from the beginning of February to the end of April, pease and beans in February, and barley in March, wheat in October ; when land is broken up late for oats, it is even sown as late sometimes as new May-day, and where barley and seeds are sown after turnips, which are fed off late, it is sown as late as May, which is not a good practice. The harvest in this county, is generally later than in the counties both north and south of it, owing I apprehend, in a great measure, to the late sowing. The corn is in general suffered to stand too long before it is cut, by which great injury is sustained both as to the produce and sample. All spring corn is mown, and wheat reaped. The labourers in the county are more than sufficient for the service of the same.

3. *Inclosed Grass Land.*—Of the inclosures, about three fifths are permanent grass, and the other two fifths are convertible land. Of the grass land, about one half is good seeding land, the rest of an inferior quality, and used as store land : in general the ground is healthy for sheep and cattle ; the land has been almost all laid down with too high ridges, by which means the furrows are frequently wet, and unproductive, and the grass on the tops of the ridges at the same time burnt up : this is an old bad custom, and I am sorry to say, that in the latest inclosed lordships, it has not been corrected. The land is much over-run with ant-hills, and in many places ; in want of ponds, rivulets or waterings ; draining the sides of the hills, which in general are full of water, would, in many places, remedy this inconvenience, by affording an ample supply of water, for all

purposes, and be a great improvement, by laying the land dry below those springs. Of late years, many occupiers have, with a great deal of spirit, destroyed the ant-hills (here called banking the land) and have done a great deal of draining, but much more still remains to be done. Draining and banking, and in some cases, ploughing, provided the land is previously drained, and well limed, before it is laid down, and the ridges lowered, are improvements I wish to recommend. It is difficult to say, what number and proportion of cattle and sheep are grazed per acre; but certain it is, that a great improvement has taken place of late years, by stocking the land much harder than was formerly the custom, the same lands in the same state now carry a great deal more stock, and the stock does as well or better.

Where the land is of a tolerable soil, the contents of the ant-hills being spread upon the land is of service to it; but where the contents of the hills are a dead clay, which frequently happens, it is thought best to carry them away. In all cases, the turf of the ant-hills should be laid down again; sometimes a compost is made of the contents with lime, and spread the following year: some clayey grass land, much over-run with ant-hills, have been ploughed as the quickest and cheapest method of getting rid of them, but the remedy has in general proved worse than the disease; for although we have a great many good farmers upon the light soils, the management of the plough upon heavy lands is little understood. This sort of grass land, though wet and spongy, is frequently broken up without being previously drained, is never winter fallowed, or cross ploughed, and after being repeatedly cropped with white corn, is laid down again to grass, with the ridges in exactly the same state as before ploughing, and the lands impoverished. I speak of the general practice, to which there may be, and certainly,



certainly are, many exceptions; but I may venture to assert, that four out of five fields of strong clayey grass land, which have been ploughed, have been injured essentially by bad management.

4. *The Meadows.*—They are chiefly upland meadows; the only meadows which are ever naturally flooded, are those by the side of the Welland, Gauß, and Calmose rivers. Those by the side of the two last are but little flooded, except in heavy rains, when great quantities of water are collected in them, and the water goes off very quick; the Welland river having but little fall, and the meadows by the side of it being very flat; the water goes off slowly, and continues so long upon the land it floods, as to make the pasturage unwholesome, and frequently rots the sheep. The hay is seldom sold, but is stocked and fed in the fields in which it grows; where the land is wet, this does much injury to it. Hay-making is not well understood; the grass is suffered to stand much too long before it is cut, and to lay too long after cutting before it is tedded; nor is it turned often enough afterwards. Green hay is seldom seen here; indeed some people like it to be mow burnt. Rolling and bush harrowing are seldom practised. Where lands are laid down for pasturage or meadow, they are usually sown with red and white clover; which latter is sometimes omitted. Hay seeds are seldom sown.

*Improvements therein.*—Rolling with heavy rollers, bush harrowing, and the method of making hay as practised in the vicinity of London, and by cutting it earlier, and turning it often, and not feeding the hay upon the land when wet, would, I apprehend, be found beneficial.

*Sheep.*—The sheep of this country are all of the polled long wool kind: in the open fields they are of a very inferior

ferior sort, and little pains taken about them. In the enclosures, the breed has been always more attended to, and lately much more than formerly. The breed is in general of the old Leicestershire, but in part of the country near Lincolnshire, the Lincolnshire breed prevails. The prices given for rams are low; from two to five guineas may be called the usual price. The new Leicestershire, or Bakewell's breed of sheep, has, however, of late years, found its way into the country, and as much as fifty guineas has been given for the hire of a ram: some people are very partial to this breed, and all to having some cross of it in their stock. The reason assigned for not liking the intire breed is, that it does not produce so much wool as the old Leicestershire sort; the superiority of it in form of carcase, and inclination to fatten, is universally allowed; and as a proof of the estimation in which it is held, it is certain, that all the ram merchants who profess dealing in the old Leicestershire breed, have had a cross of this breed: the great prices of the rams is the chief reason of its not being generally adopted. The fat sheep are sold at London, and at Melton Mowbray to go North. They are sold at two years old from turnips, and two and a half from grass: very few are sheared three times. Folding is practised very seldom, except in the open fields. I believe all are perfectly satisfied, it greatly injures the sheep; some farmers give hay, some straw, and some nothing with their turnips. The lambs are generally dropped in March and April, and weaned in September. Few fat lambs sold. The sheep are subject to a disease called the foot-halt, which is thought to be catching: paring the feet, and applying the butter of antimony, is the remedy.

Where there are a number of flies, they suffer very much from them. I have seen sheep of this breed quite ruined by

the flies, and Welch sheep in the same fields not at all affected by them.

*Cattle.*—Very few cattle are reared, and those few of no particular breed ; in general bad ones. A few of Bakewell's breed of long horns, and some of the Devonshire breed, have been lately introduced with an intention of rearing. The calves which are bred, are in general sold fat to the butcher, and are chiefly fed by the cottagers : the veal is esteemed very good. The dairies are very few ; except for family use ; grazing is the principal object.

The cattle most in request are the Irish and small Scotch. The Irish have not been known in this country a great while, but they are now bought in preference to the Welch, Shopshire and large Scotch, which were formerly grazed here. The graziers say the Irish are very cheap in comparison to the others. They vary much, some being very good, others as bad ; they are all long horned, and by all accounts have been much improved by bulls sent to Ireland from Mr. Bakewell. In general they are, after one summers grass, sent to London ; stall feeding being little practised : now and then hay is given in the fields to some of the best, to keep them till after Christmas. Barren cows are frequently grazed, and some long and short horned heifers of the Durham breed, are bought in, at two years old, and sold when three years old in calf to jobbers, who take them to the dairy countries, or to London.

*Horses.*—Some tolerable good black horses are bred, but not the very best.

*Improvement of Stock.*—The further introduction of Mr. Bakewell's breed of sheep, would, in my opinion, improve

the stock of this country, and good black stallions would also be of much service.

*Watering.*—Very little land is watered artificially, and as I have before observed, there can but little be done by river water. The hills in this county (as in all others) contain a great quantity of water, which breaks out on the sides, and forms wet swampy places, which spread over the land below; whereby large tracts in their present state, are not worth more than ten shillings an acre, which when drained and laid dry, would readily set for twenty-nine shillings. This water might, by drains, become useful instead of hurtful, as it now is; and the method I should recommend for accomplishing this great improvement is, by making deep drains, by the side of the hills, a little above where the wet breaks out, (which may be easily known at all times in the year.) These drains should be made from four to six feet deep, or till they come to a sound bottom, which, in most places in this county, will be found to be a blue clay, then to make a good drain upon that bottom with stone about fourteen inches deep, and seven wide; the water by this method, might, in many cases, be collected into a reservoir, and from thence flood the land below; this would be turning swampy ground to great benefit. Irrigation being always allowed to be the cheapest and best improvement.

*Waste Lands.*—There are very few waste lands in this county. The only improvements I can recommend for them, is to inclose them, as they are well calculated for tillage: In their present state, a little bad stock is kept upon them; few parts are so well calculated for planting as for tillage.

*Labor.*—The price of labor is nearly the same all over the county, but rather higher in the east than in the west part; some farmers hire their laborers from the beginning

of hay time to the end of harvest, commonly about ten weeks ; their wages from nine to eleven shillings per week with beer ; \* from the end of harvest to the end of October, from seven to nine shillings ; from thence to May, from six to seven shillings ; and from that time to the beginning of haytime, from seven to nine shillings per week.

Laborers begin to work in haytime and harvest at five in the morning, and continue till sun-set, and from six to six the other part of the year, excepting winter, when they work from light to dark. Women seldom go to work in fields in winter, but in the summer, field work is their chief employment—wages from six pence to eight pence per day. Seven to eight pounds a year, is given for a man that can plough and sow. Maid servants wages from three pound ten, to four pound a year.

The average price of piece work is as follows :

	s.	d.
Mowing Grass	2	6 per acre.
Clover	1	6
Barley	1	9
Oats	2	0
Pease	1	6
Reaping Wheat	6	6
Hoeing Turnips	5	0
Threshing Wheat	1	10 per quarter.
Barley	1	14
Oats	0	10
Beans	1	0
Pease	1	0

\* A great many farmers board their laborers in hay time and harvest ; if they are hired for the whole time, then their wages is from six to eight shillings a week ; and if only for the harvest month, from thirty-four to thirty-eight shillings for the time.

The rent of the cottage houses, varies more than any other article, the laborer has to pay for. In some towns in the county, a comfortable house with a good garden is let at one pound a year, which are hired of gentlemen ; but in other towns, where cottage houses are let at second hand, a high rent is paid for them, and as much as two pound a year is given for a miserable house without a garden. I think every laborer should have a good garden to his house ; the comforts they derive from it are innumerable ; it greatly assists him in keeping a pig, and there the poor man, who has only a scanty allowance of meat, must find the deficiency greatly filled up, with a variety of vegetables to eat with it : generally speaking, the farmers in this county, are well disposed to the poor, and if they were to indulge their laborers with sowing potatoes in the angles of the field which cannot be ploughed, it would be of great support to them in winter. I know several farmers do this, but it is not a general practice.

*Drains.*—There is no fen land in this county, and the drains for carrying off the water in boggy or spongy places, are, in the common practice, made much too shallow. The drains I wish to recommend, are those already mentioned.

*Paring and Burning.*—This practice is only used upon cold soils, where the land is coarse and over run with hassocks, and is of infinite service to this sort of land, if only ploughed for two years after, and then laid to grass ; but it too often happens, that such lands are kept under the plough till they become quite exhausted, and then are laid down in a very foul weak state ; I believe that in most of the lands which are used for the above purpose, under-draining would be by far the quickest and the best improvement ; the price for paring and burning is from eighteen shillings to a guinea an acre.

*Woods.*—Oak timber is not much raised in this county; and there is but little fit for the navy. The best sort is used for building, and of late for the canals and navigations; the coarser sort, which is not used for fences, &c. is made into gates, hurdles, &c. and sold at Spalding and Peterborough fairs, and carried into the fen country.

Planting of oak, should be more attended to, as it thrives well in most parts of the county: making plantations of oak in the corners of fields, where the angles are acute, would be a great ornament as well as an advantage to an estate, and done at a small expence. This is a desirable improvement, when the best oak and timber sells for half a crown the cubic foot; the underwood is cut from twelve to sixteen years growth; some woods are good; others not so good; owing to their having been cut too high from the ground, and not early enough in the season. All underwood should be cut as soon as the leaf is off, and not more than four inches above the ground, which would greatly invigorate the spring shoots; and I am of opinion that wood so cut and managed, in the course of twelve years, will net more by two pound an acre, than if cut high. Drawing of woods is another improvement; much benefit would arise by making open grips to carry off the water, which should be opened every third year at furthest; underwood is sold from three to six pound an acre.

*Provisions.*—Corn is something cheaper in Rutland, than in the adjoining counties, (though something dearer than in London) which is principally owing to the want of water carriage; beef, mutton, and pork, are nearly the same as in the neighbouring districts, and as near as can be ascertained about one penny per pound cheaper than in London; but when it is considered, that the prime meat is sent to London, or sold at distant fairs, the price paid for the in-

terior sort is high. I suppose the price of provisions, in proportion to the times, is likely to continue without much variation.

*Roads.*—The parochial roads are mostly ill formed, being raised too high before the materials are laid upon them, and the materials are laid on too large; therefore must remain in a bad state, until a better mode is adopted; and parish officers are more attentive in enforcing parochial duty, which is very much neglected.

A custom prevails, which I hope will soon be removed, that is, parishes not assisting one another with materials; for without this friendly aid, in the parish which unfortunately has no materials of its own, the roads must still remain in that bad state, and be perhaps reproached by their neighbours who should assist them; this custom of each parish, reserving its materials to itself, is carried so far, that even upon the turnpike roads, notwithstanding the turnpike acts are perfectly explicit on this head, the surveyor never thinks of taking materials from any adjoining parish, if the land owners (which is too often the case) make any objection to it.

The turnpike roads, like the others, have been badly formed and not in good repair; the materials for repairing them, which are stone in general, are laid on in the autumn and winter, instead of the spring; levelling the sides of the road for the carriages to pass upon, in the summer, would be of great benefit to the roads, and pleasure to the traveller; but this is neglected, which ought not to be, as by this method the roads repaired, would have a long time to settle, and be in good order against the winter.

*Farm Houses.*—The houses are generally speaking good, but inconveniently situated, being mostly in towns; whereas  
if



if they were built upon the farms, it would make them more valuable both to landlord and tenant; the offices are not well constructed, there are too few of them, and they are mostly badly connected.

*Leases.*—The greatest part of the land is let to tenants, from year to year. The covenants between landlord and tenant are in general the same now that have existed a long time back; a few new ones have of late been introduced, namely,

1. That of only taking one crop of white corn before a fallow.

2. The tenant not living in the farm house to pay an additional rent of ten pounds a year.

3. The tenant not keeping the buildings and fences in good repair, and after three months notice, neglecting or refusing to repair them, the landlord to have power to enter and do the same; and for the amount of the expences to have the same remedy as for rent. Seven, fourteen, and twenty-one years, are the usual terms of a lease. The tenant not to mow the same grounds two years together, nor twice in one year, but to mow one year and graze the next.

*Manufactures.*—No manufacture is carried on in this county of any account; the want of water, and scarcity of fuel, are the only reasons, and not want of inclination, spirit, or property in the people of the county.

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## MISCELLANEOUS OBSERVATIONS.

Summer fallowing is universally practised; winter fallows by a few people only: but the practice gains ground.—The only manures are dung and lime. No particular attention

is paid to the making of compost dunghills.—There are no implements of husbandry peculiar to the county. The Leicestershire single wheel and double furrow ploughs, have been lately introduced, and bid fair to banish the old long beamed swing ploughs. The harrows are seldom large or heavy enough; the rollers are mostly too light, none fit for grass land.—Horses alone are made use of: there is only one ox team in the county.

*Poor.*—There are several friendly societies in this county, which are much encouraged by gentlemen; the poor industrious man has it in his power, by becoming a member of them, to purchase a comfortable support in old age, sickness or other infirmities, of five shillings per week, and some few who have got a large capital, allow six shillings a week; and if a bad custom was abolished, which is that of spending two pence out of a shilling a month, which each member pays to the society, and this money so saved, was added to the stock, it must in a short time, give an additional shilling per week, it being exactly the same proportion as ten pence a month is to five shillings per week; I hope there is not a member belonging to any society, who will not cheerfully give up twelve pints of ale a year, for the comfortable addition of one shilling a week in old age. These societies are, undoubtedly, a public good, and greatly ease the poor rates.

There is also another society established in this county within these few years, which has been of infinite service in promoting industry, amongst the children of the laborers, and the good effects of it have already been felt by the poor rates having been lowered since its establishment, instead of having risen; which I believe to be the case in most counties in England, during the same period; but were the poor rates to stand at the same sum they did some time ago, it might fairly be called a lowering of the rates, because the price

price of several articles which the poor use, has since the establishment of this society, been raised, and the rental of the county has increased, consequently less per cent, out of the produce, is paid to the rates, supposing the sum of money, in the rate, to be the same; but here the sum itself is lowered, which no apparent cause has so much contributed to, as the institution of this society of industry, for which the county is indebted to the zeal of the public spirit of the reverend Mr. Foster of Ryall; he proposed it, and has taken, and continues to take infinite pains in promoting it, and by him I have been favoured with the following account of the establishment of the society, and of the proceedings in it, which, I think useful to add, being convinced that it cannot be too publicly made known, or too generally adopted.

The promoting of industry amongst the laboring part of the community, and particularly at an early period of their lives, being undoubtedly the most desirable of all things, I shall first here observe, from the statement of the poor's rates, underneath, that there appears a great increase from the year 1776 to 1785, when this society commenced. The difference between those two years being 872l. 19s. but from 1785 to 1793 there is only one year in which there is an increase, the year 1789, and in that year the increase is only 27l. 15s. In every other year there is a decrease of the rates, and the difference between the rates of 1785, when this society commenced, and 1793, is a decrease of 93l. 19s.

It is to be observed, that the poor rates in this county, are considerably higher, in those parishes which are not inclosed, than in those which are inclosed.

The average of the rates is about 1s. 6d. in the pound.

The following is the yearly amount of the rates for the whole county for the following eleven years :

		£.	s.	d.
	1776	—	2664	6 0
	1780	—	2886	19 0
N.B. In this year the Society began. }	1785	—	3537	5 0
	1786	—	3415	16 0
	1787	—	3008	15 0
	1788	—	3075	14 0
	1789	—	3567	0 0.
	1790	—	3171	19 0
	1791	—	3537	3 0
	1792	—	3274	19 0
	1793	—	3443	6 0

At the general quarter sessions of the peace for the county, held on the 14th of July 1785, His Majesty's justices of the peace then assembled, having taken into their consideration the increase of the poor rates, the want of regard to the employments of the poor in general, and of the infant poor in particular ; resolved, that the following rates and orders (pursuant to the statutes made and provided for the relief and maintenance of the poor) should be observed within the several parishes of the said county.

1. That the overseers of the poor of each parish, do immediately provide such raw materials, as wool, woollen yarn, hemp, and flax, as also wheels, and other implements for the employment of the poor of every denomination, as shall be necessary to enable them to do such work, as they are capable of performing, either by spinning, knitting, or any other employment which the overseer may direct ; and that the overseers do make complaint, before a justice of the peace, of those who refuse to work, or who wilfully spoil the raw materials given them ; and that the

D

overseers

overseers shall in the several respects above mentioned, act according to the direction of the nearest justice.

2. That no person be allowed any relief, till they have done such work as they are capable of.

3. That from and after the 1st day of January then next, no person be allowed any relief, on account of any child above \* six years of age, who shall not be able to knit.

4. That no person be allowed any relief, on account of any child, above nine years of age, who shall not be able to spin either linen, or woollen.

5. That the overseers of the poor of each parish, shall meet, at the least, once every month, in the church of their respective parishes, upon the Sunday, after divine service; there to consider of the best course and order to be taken and made in the employment of the poor.

That the magistrates might have the advice and assistance of the county at large, in endeavoring to check the progress of the evils above mentioned, a meeting of the owners and occupiers of lands and tenements in the county of Rutland, was requested to be holden at Oakham, in September 1785. At which meeting it was resolved, to adopt a plan which a few years before had been proposed, and with great success carried into execution, by the Rev. Mr. Bowyer, in the southern district in the parts of Lindsey, and the county of Lincoln; and the following proposals were agreed upon, and ordered to be made public in the county of Rutland.

1. That every parish be requested to subscribe a sum, amounting to the proportion of one per cent. upon the poor rates of the last year, and to authorise (at a vestry to be immediately called for that purpose) the overseer of the poor

\* Since the establishment of this society, many children of five, and some of four years old, have obtained premiums.

poor, to pay the said subscription [into the hands of the nearest chief constable, before the 10th day of November.

2. That individuals be solicited, to subscribe the sum of five shillings each, annually; larger sums to be received as benefactions.

3. That a meeting be holden at Oakham, on the 14th day of November next, to chuse a committee for the management of the business.

4. That premiums, consisting of cloathing, be given from the said subscription, to such children of certain ages and description, as in a given time, shall have produced the greatest quantity of work, of different kinds, and of the best quality.

5. That when any young person shall go out to apprenticeship, or to service,\* or shall be married with the approbation of the committee, such persons shall receive not less than 5l. nor exceeding 10l. if he or she shall have received three of the annual premiums given by the committee; not less than 2l. nor exceeding 3l. if he or she shall have received two of the annual premiums; and not less than 30s. nor exceeding 2l. if he or she shall have received one premium.

6. That premiums, at the direction of the committee, be given to those day laborers † who bring up four or more children, born in wedlock, to the age of fourteen years, without relief from the parish.

7. That as the most effectual means of preventing families becoming chargeable, it be strongly recommended to the parish officers, to furnish (gratis) wheels to those persons who wish to employ themselves; although they

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should

\* The sum of 21l. 20s. has been given by the committee, to thirteen young persons in service.

† The sum of 76l. 13s. has been given to twenty-seven day laborers.

should not be chargeable to the parish; and to order the teachers in the workhouses, to allow them free admission into the spinning room, and to teach them (gratis) and that the profits arising from the work of such children, be for the benefit of their parents.

And at a general meeting of the county on the 14th day of November 1785, a committee was appointed, consisting of twenty-three persons, who undertook the management of the business for one year.

The committee, having at their next meeting on the 10th day of December, ascertained the number of subscribing parishes to be forty-six, proceeded to divide them into five classes, having regard to neighbourhood, and to the amount of the parish rates; and each member of the committee undertook to \* superintend one or more parishes.

It appearing to the committee, at their meeting on the 7th day of February 1786, that the sum of £208l. 19s. 4½d. had been received by their treasurer, they resolved that  
22l.

\* Those who undertake to superintend the parishes, are called trustees, and it is the business of a trustee to acquaint the children of the parish which he superintends, with the rules and orders of the committee; to take care that the work required to be done, be punctually performed; to collect the subscriptions and benefactions; and prevent any imposition that may be attempted to be made upon the society; so that the success of this undertaking depends very much upon the attention of the trustees.

† Benefactions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	£.	s.	d.
Annual Subscriptions of 5s.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	112	4	3
Parish Subscriptions of 1 per cent. of the Poor's Rates	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	17	3
																				28	17	10½
																				<hr/>		
																				£.208	19	4½
																				<hr/>		

† 22l. 19s. should be allowed for the present year, to each of the five classes, to purchase cloathing for those children who should be found to be the most industrious.

On the 27th day of May 1786, the committee proceeded to the distribution of the premiums: the number of § candidates amounted to 236.

Money allowed by the committee, in each year, for purchasing cloathing.

		£.	s.	d.
In 1786	—	108	9	0
1787	—	104	6	0
1788	—	104	6	0
1789	—	83	5	0
1790	—	83	5	0
1791	—	86	5	0
1792	—	88	10	0
1793	—	92	5	0

The number of candidates in the different years, from the Institution of the society.

1786	Spinners of Jersey	211	
	Linen	3	
	Knitters	22	
		—	236
1787	- - - Jersey	302	
	Linen	9	
	Knitters	37	
		—	348

† This sum was divided into 25 premiums, making 1s the § classes 22s premiums.

§ A certain quantity of work is required to be done, in two months, before any child can be admitted a candidate; and a person well acquainted with spinning and knitting, is appointed to see each candidate spin or knit one hour; which hour's work is produced to the committee on the day the premiums are disposed of.



1788	- - -	Jersey	257	
		Linen	15	
		Knitters	60	
				332
1789	- - -	Jersey	203	
		Linen	8	
		Knitters	29	
				240
1790	- - -	Jersey	232	
		Linen	15	
		Knitters	40	
				287
1791	- - -	Jersey	263	
		Linen	19	
		Knitters	57	
				339
1792	- - -	Jersey	279	
		Linen	15	
		Knitters	69	
				363
1793	- - -	Jersey	261	
		Linen	21	
		Knitters	89	
				371

*Inclosures.*—About one third of the county is uninclosed; the other two thirds are inclosed. It is much to be regretted, that so large a portion should be uninclosed, and in so bad a state of cultivation, that improvements cannot be expected. It is under consideration, to apply to parliament, for acts, to inclose three lordships in this county next summer, and it is to be hoped that more will follow that excellent example. The advantages which have been found to result from inclosing land, in regard to the increase of rent, quantity or quality of produce, improvement of stock, &c. are

the greatest possible. Every sort of land, when inclosed, is put to the use for which it is best adapted. The profits go to the owner, by the increased produce of the land already cultivated, and by bringing uncultivated parts of the open fields under good cultivation, have been very considerable, and in the stock the benefit is most peculiarly felt.

In regard to that important question, whether inclosures have increased or decreased population, I am of opinion, when the first great run of inclosures took place (which was about the year 1760) that in several new inclosed parishes, the laborers wanted employment, therefore were obliged to take shelter in other parishes, or get other employment. The reason was obvious. The farmers at that time, laid a considerable part to grass, and the remainder was kept in the same course of crops; and nearly in every respect the like management, as in the open field state. But since better modes of cultivation have been adopted, which are still improving, I have no scruple to say inclosing increases population.

Banking, Haffacking, and Draining, are all winter works; and there is in general no want of employment, as these works are carried on with spirit in this county: and it is a great happiness, as by these advantages the laborers get employment, and in general they are a set of industrious honest men.

*Advantages of Inclosures.*—Many gentlemen who have property in open fields, interest themselves warmly in the scheme of inclosing. Much is due to that public spirit, and many important advantages are thence to be expected. How can a farmer, with all the toil and pains he is capable of, make any considerable improvement in his land, in an open field state? He can never be paid for his trouble; his expences, where his and lay intermixed, which is always the case in open fields, are  
more

more than his improvements can be, if he had ever so much time or inclination to do it ; he is confined to the expensive method of tillage, though the nature of the soil be such, as to be turned into good pasture, and capable of becoming of more value to the occupiers at one tenth part of the expence. Inclosing is also an encouragement to the growth of timber, which every one must acknowledge, to be a national good, and in all other respects as well as planting, the public is undoubtedly benefited by them.

A trading country, like England, will always want timber, and the consumption of it, in time of war, is so great, as to make it the interest, as well as the duty of gentlemen of fortune, to promote the growth of it ; besides that, it adds much to the beauty and improvement of their estates, to plant upon them such forest trees, as may best suit their soil and situation. Another inestimable advantage arises from inclosures, which is, having the land, tithe free, which, at present, cannot be so well effected any other way.

I cannot but lament, that an act of parliament for that purpose, is made so expensive, and express my hope, that by the exertions of the Board of Agriculture, that impediment to improvement may be done away. Upon the commencement of all inclosures, attention should be paid to the state of the roads, and effectual measures pursued for making and repairing the same, at the proprietor's expence ; this I understand is now effectually provided for, by a standing order of the House of Commons in all Bills for inclosing, and afterwards, care should be taken, that the parochial duty is not neglected : which, with the addition of a small levy will be sufficient to keep them in good repair. Where ploughed land is let upon leases, great care and attention should be taken, in making covenants between landlord and tenant applicable to the soils ; but the great business is, to see them afterwards enforced ; for want of this, I have often seen farms greatly injured by the tenants, while the landlord thought himself perfectly

perfectly secure, by the covenants having been judiciously drawn, but to his great surprise, at the expiration of the term, he finds his farm worse by fifty per cent. When this is the case, the landlord not knowing what to do with his land in this ruinous state, is induced to let it to a monied man at a very low rent, to improve, and on his own terms; this seldom or ever succeeds; the tenant knows well how to manage these terms to his own advantage; and it is more than ten to one, but that the farm is left in as bad, if not worse state, than when he entered upon it.

Most gentlemen of landed property, have farms upon their estates in this ruinous state, and which must fall into their own hands, or be let at so low a rent, that it becomes comparatively speaking, no estate: when this happens, it is the landlord's interest to take such a farm into his own hands, and put it under the best management possible for four or five years, or until it is got in so good a state, that a responsible tenant will gladly take it upon the landlord's terms: this will be giving an example to others, and satisfaction to himself in seeing his land in a good state of cultivation, and his tenant going on well and following a rotation of crops, by which he will be ultimately benefitted, and the land kept in good condition. This makes the interest of landlord and tenant unite in the same cause, upon which the happiness of both so much depends, that it is much to be regretted when either deviate therefrom.

Besides, if gentlemen were regularly to take farms into their own hands, that are badly cultivated, and as regularly let them again, when put into proper order, it might be the means of promoting a great spirit of improvement and good management among the farmers.

I am sure every good tenant will agree with me in what I have suggested, when he considers, how exceedingly hard it is, upon every industrious occupier of land, to have one

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or more farms in his parish, so reduced by bad management as to be let, and consequently rated, at half the rent it had been let for, and was fairly worth, at the commencement of a lease; by which means, an additional burthen, (it may be of one half the parish levies, which had been before equal,) is, by bad managers and reduced rents, thrown on the industrious tenants, whose farms are well and properly managed and cultivated. This is only a private injury 'tis true, but I hope it is sufficient to apologize for what I have advanced.

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## CONCLUSION.

The spirit of improvement has increased very much of late years, among the occupiers of land in Rutland. The best and surest method to excite that spirit, is to set the farmer a good example, and this can only be done by Gentlemen of property, whose interest is more than equally concerned with the tenant; the advantage to the former being permanent, whilst that of the latter is of a more temporary nature. I think, upon every estate, that the owner should sacrifice a few acres of land, to the trial of every useful experiment, for if the tenants see any advantage resulting from them, they will be sure to follow.

FINIS.

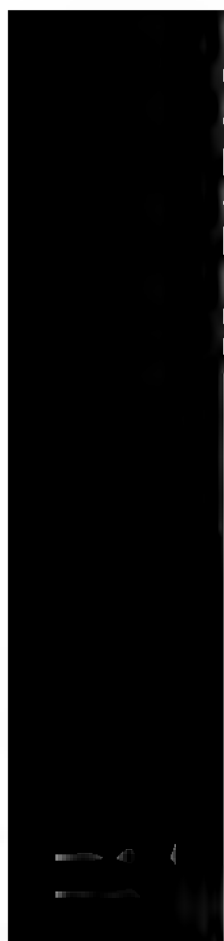












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GENERAL VIEW  
OF THE  
AGRICULTURE  
OF THE COUNTY OF  
LINCOLN.

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GENERAL VIEW  
OF THE  
RICULTURE  
OF THE COUNTY OF  
LINCOLN,  
OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT

BY THOMAS STONE,

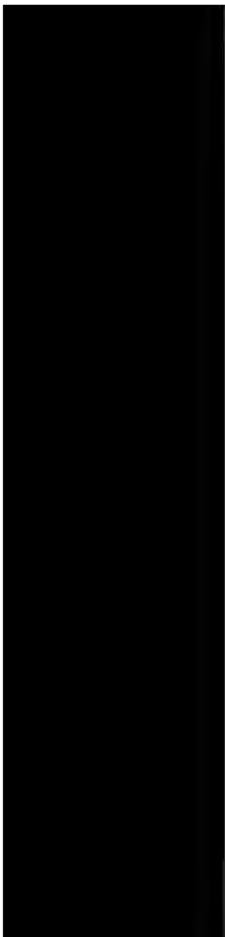
LAND-SURVEYOR, GRAY'S INN, LONDON.

*Gr. Brit.*

FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE  
AND INTERNAL IMPROVEMENT.

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L O N D O N :  
PRINTED BY JOHN NICHOLS.  
M,DCC,XCIV.



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## TO THE READER.

IT is requested that this paper, may be returned to the culture, at its office in London, with any additional remarks which may occur on the perusal, written on the as may be convenient.

It is hardly necessary to add, that this report, is, at present circulated, for the purpose merely of procuring farther respecting the husbandry of this district, and of enabling contribute his mite, to the improvement of the country.

The Board has adopted the same plan, in regard to all ties in the united kingdom; and will be happy to give every its power, to any person who may be desirous of improving cattle, sheep, &c. or of trying any useful experiment in husbandry.

LONDON, FEB. 1794.

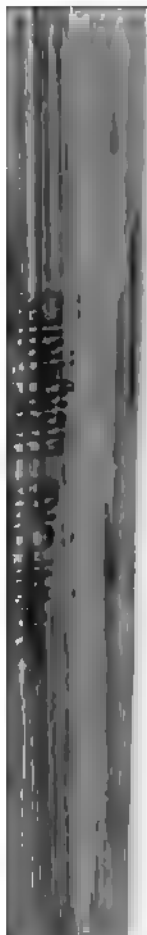




## INTRODUCTION.

CONFORMABLY to the desire of the Board of Agriculture, communicated to me by Sir JOHN SINCLAIR, its President, I have undertaken to describe, in as concise terms as the extent of so interesting a district will admit of, the present state of the agriculture of the county of LINCOLN. In the progress of which design, should any of my statements seemingly bear too hard upon the conduct or management of particular individuals, it is not intended by me as any personal reflexion upon them. The faithful execution of the important business committed to my charge, must, at any rate, supersede every other consideration: And in whatever instances I may commit errors, from the vast extent of the county under review, or from other circumstances, the subject (from the plan so happily adopted by the Board, of circulating these reports previous to their being published) lies open to after-discussion, correction, and improvement. It must occur, also, to the mind of every person of observation and candour, that the business of a reformer is an odious task, and attended with innumerable difficulties to execute it to advantage, when even a single object is in view; but becomes still more arduous, when a variety of points are to come under discussion.

Every country has its excellences and defects, as well in the inherent qualities of its soil, as in the manners, customs, and modes of management of its inhabitants. And it behoves those persons, whose province it is, whether as proprietors, agents, stewards, or otherwise, to correct mismanagement and existing abuses, in any particular parish or district,—to be well ascertained of the practicability, and the proba-



ble advantages, to be derived from subverting or altering any such abuses, before they set out upon the measure. If that point be not strictly attended to, any miscarriage necessarily tends to bring a very unfortunate degree of discredit upon many other procedures, the success of which would be certain; thereby casting a damp upon the progress and the spirit of improvement.—It is no less necessary to examine strictly into the implements of husbandry, and to compare them with their uses, that no advantages may be overlooked, and a less applicable sort substituted for a better: Such circumstances have happened, where a violent zeal for reformation has ran before every other consideration. On the other hand it is to be observed, that every occupier of land, whose knowledge and pursuits have been confined to any given parish or district, has formed to himself an idea of that mode of management, upon the soil he occupies, which appears to him the utmost point of perfection; and he pursues it in a more or less direct path, in proportion as his capital, his permanency in the situation, and a variety of indirect views, will allow him. When any question shall arise upon the annual value of such his occupation, he does not scruple to stand up with confidence and assert, (what he verily believes to be true), that he knows the value of it better than any other man; he has sown and reaped upon it; he has seen it in every season for a series of years:—And the plausibility of such assertions very frequently have weight, with persons of great good sense and abundant knowledge of the world. In vain might any person, who has made agriculture his particular study,—come forth to inform him, that his mode of managing his farm tends to continue the soil weak and foul; that he too often ploughs it, and crops it with white grain: That meliorating crops should be interwoven therewith, and that it should be laid down with the *first* crop of corn, sowing grass seeds next after a fallow, and turnips, for two or three years: That lime would be a considerable  
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improve-

improvement upon the soil, which perhaps is cheap, and at hand : That a considerable portion of meadow land might be flooded at pleasure, according to the Somersetshire plan of making water meadows : that upon searching into the bowels of the earth, there is a probability of finding marle, or clay, which would greatly tend to fertilize the surface, if judiciously laid upon it, together with innumerable other improvements which might be pointed out: whilst ancient prejudices remain, the most convincing arguments are ineffectual. It is example, and the imitation of it enforced by gentlemen of landed property, in the leases they grant, and that only, that can bring about a radical cure; nevertheless, it often occurs, that speculative, and even practical men, are misled, and mistake appearances. The soils which appear most familiar in conversation, or in treatises, on husbandry, are clay, strong loam, mixed soil, light loam, and sand, and the different degrees of mixture of the extreme heavy, and extreme light, being clay and sand, with the different sorts of stones, pebbles, and soil, which arise from the bodies of putrified and decayed roots, exfoliations, and deposits of vegetables, plants, and manure, comprehend all the soils in the united kingdoms, and it is the discrimination of the different sorts and degrees of mixture of them, upon which the great hinge of transplanting as it were, any particular mode of culture from one county to another, under the idea of similar soils requiring and admitting of similar management, depend. Besides, it must not be forgotten, that I have now only alluded to the surface, attention should be equally paid to the nature of the strata of soil, which lie immediately under that, which is in common use for cultivation of grain and vegetables, on this depends, in a great degree, its fertility, for if the stratum immediately under the superficial one, is of a strong retentive nature, the vegetation will be checked in wet seasons by its coldness,

and

and the mucilage necessary for the food of the crop will be too much mixed with water to afford proper nourishment, the plants will be irrecoverably checked or perished. If, on the other hand, the stratum of soil immediately under the superficial one is too loose, and unretentive, the moisture necessary to be mixed with mucilage, for a due support of the plants, being too thin, will sink with it, and be washed away, and it is upon the different degrees of this retentive quality of the soil upon which, in a considerable degree, the value of the surface, and of course, the nicety of judgment in a surveyor depends. From what has already been observed, it does not require much time to set forth the particular soil which is most valuable as to the foregoing criterions, viz. that which is neither too retentive of moisture, to chill the plants, or render their food too thin, nor too loose in its nature to admit its running through it too rapidly; but otherwise, gradually filtering the superfluous pure moisture through it, leaving behind it in the soil, all the food for plants with which in its passage it was mixed, *in the most flourishing state.*

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### PREJUDICES AGAINST THE COUNTY.

ESTATES have been sold in Lincolnshire, within a short distance of time, for half their real value. Gentlemen possessing landed property in this county, (and having estates upon which they reside in others), either from a prejudice against the district, generally imbibed upon an idea, that it is low, and subject to inundations, without minutely examining into the state and condition of their property, have for this, and various reasons, made their election to sell their property here, in order, perhaps, to purchase in another; and, in one instance, it is said, that an estate was sold in this county, not many years ago, for near

so less than it was soon afterwards proved to be

but since the American war, that a prejudice, formerly prevailed amongst monied men, as to the state of the drainage of this county, has in any way been dispelled. In advancing money upon mercantile securities, this county formerly was particularly exposed, which is a circumstance well known to the country in London.

of the county being low, and its drainage having for series of years been neglected, a conclusion had been given by persons in remote situations, unacquainted with the whole district is in winter a kind of duck-pond. To have informed them that the 2-3ds of it is high land, and, requiring no extraordinary drainage, would have little credit as the most extravagant assertion that could be devised.

#### *EXTENT of the COUNTY.*

According to the best accounts I have been enabled to obtain, this county is 77 miles long, 48 broad, and 1400 in circumference. It contains 2958 square miles. It is divided into 3 provinces, viz. Holland, Kersteven, and the Wier. These provinces are subdivided into 30

A gentleman, in a distant county, possessed of a considerable estate in the county, being disposed to sell it, sent down a valuer of land from his own county, a man of integrity, and of general acknowledged skill in his business; who, after making his survey, in a wet, and unfavourable season, returned to his employer with the unfavourable impression he had formed, and recommended, that in order to establish the permanency of the rent, he should grant the tenant a lease for 21 years. This was accordingly done, and the estate was immediately offered for sale. It fetched, however, an indifferent price, that the purchaser is said to have been a sum from 15 to 20 thousand pounds by the bargain. Many other instances of the same nature might be quoted.

hundreds,

hundreds, containing 630 parishes, 1 city, and 26 market towns. The quantity of acres are computed at 1,893,120. But as it is not necessary, or even possible, on the present occasion, to be minutely exact in regard to the separation of the quantities of the different soils, I shall hazard an opinion that they may be arranged in the following proportions :

	Acres.
Inclosed marsh and fen land — —	473,000
Commons, wastes, and unembarked salt marshes	200,000
Common fields — — — —	268,000
Wood-land — — — —	25,000
Inclosed up land — — — —	927,120
Total —	<u>1,893,120</u>

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### S O I L.

EVERY soil in the united kingdom, may be found in this county, in considerable quantities, from the sharpest sand, and lightest moor, to the strongest clay, in all its various mixture and qualities.

No county in England can boast such various gifts of nature, bestowed with so even an hand, that a general mixture of property and soils, if judiciously applied in the letting, would operate upon the whole in the same ratio of advantage, with which such gifts are attended upon a well cultivated farm, one and the same district affording light loamy soils, for the production of corn and green winter wood, whilst the neighbouring marsh affords excellent pasture for feeding cattle and sheep in Summer, advantages, which, when laid together, cannot be equalled in any degree by the separate uses of either.

*Climate*

*Climate.* The air and climate of this county, in point of purity, is, upon the highest part of it, equal to any in the kingdom. Upon the fenny and marshy parts, it has been very much improved of late years, since the drainage has been more attended to; and at this time, the inhabitants of the county have no dread of their healths being injured, in shifting their abodes, even at advanced periods of life, from the upper parts called the Wolds, to the lowest part of the fens and marshes. The time of harvest in the Northern and Eastern part of the county, lying open to the ocean, is a little delayed from that circumstance; but the proper times and seasons, for depositing the various manures in the ground, were to be judiciously attended to, as well as the proper times of laying down the land for hay, and the hay and corn harvest would come on much earlier than at present, and nearly as soon in this county as in any other of the same latitude, except in some rare situations, where the soil is in some degree cold and flinty, being of a deep clay nature.



## PRESENT STATE OF THE COUNTY.

FOR the sake of making my observations, on the present state of the county, the better understood, I shall consider it under four heads, namely ; 1. Fen ; 2. Strong loamy soils, not subject to be overflowed ; 3. The Woulds, or light soils ; and, 4. The marshes. The property in the fens, marshes, and Woulds, is, in general, in the hands of large proprietors ; on the strong loamy soils, it is more diffused among the yeomanry, and the occupations are laid out in a similar way, proprietors of extensive landed property, letting it, for the most part, in an equal ratio, to be occupied in large parcels.

The fens are situated on the South-East part of the county : the marshes extend along the sea-coast, from the Mouth of the Humber, to Cross Keys Wash, the strong loamy soils on the South, South-East, and South-West, and part in the North-West, and skirting between the marshes, fens, and high lands, including that portion of mixed arable and pasture land called the middle marsh. The woulds, or light soils, are chiefly North of Lincoln ; with a small portion on the South, extending to the Trent and Humber, on the North and North-East, and on the North-East and East to the marshes.

## I. THE FENS.

**MODE OF CULTIVATION.** That part of the Fens which is in the way of cultivation, is chiefly arable, and is occasionally laid down for pasture—when exhausted by cropping, with ray-grass and clover. Paring and burning is the great resource, and here it is practised in the most extensive extent.

The system of husbandry, or precise mode of management, depending to the quality of the land (generally speaking) is none. Doubtless, in so vast an extent of country, there are occupiers who approach nearer to perfection in management than others; but the general practice is, to begin with paring and burning, as the foundation of husbandry, to sow cole, or rape-seed (which often serves for seed). Then oats are sowed in succession, year after year, till the powers of the land are nearly exhausted, and it is doubtful, whether the farmer shall, by a repetition of croppings, be repaid for his seed and labour; when, such land is left to repair itself by rest, for many years. Nor is it an universal practice to sow grass-seeds after the last crop of grain, and if this process succeeds entirely to the wishes of the farmer, the sooner the land acquires a great thickness of coarse productions, the better; when it will the sooner require paring and burning, and the use of a large quantity of vegetable ashes, a promising preparation for successive crops of oats, or white grain. Some parts of the fens are in a state of pasture, and now removed from the plough by the respective proprietors; the land is stocked with fattening oxen and sheep, and the more fertile with breeding stock.

No part of the Fens can possibly be watered as an improvement: in Winter there is too much of that element, and in Summer, the freshes from the highlands, will scarcely afford a sufficient quantity of water for the stock to drink; and if more could be received down the rivers, to scour them out, and prevent their choaking up, it ought to be so used, as a primary object. Fallowing is very rarely practised, •paring and burning being its substitute.

*Crops in the Fens.* Oats are the grain chiefly cultivated, with here and there wheat, beans, peas, and barley. Cole-seed and clover are the chief vegetable crops, but the latter is generally sown with bad or foul ray-grass, when the land is exhausted by repeated crops of white grain, so that the advantage to be derived by a fair separate use of it, is very rarely experienced.

*Woad.* At Brothertoft, or in its vicinity, near Boston, large quantities of woad are cultivated by Mr. Cartwright and Mr. Harrison, and with profit. The former of these gentlemen has erected some very convenient buildings, for manufacturing, or converting it to its right uses. The cultivation of this plant in a systematic manner, seems to be his intention, and being possessed of a considerable tract of land, he will be enabled to continue regular apportionments of it, for 4 or 5 years bearing woad, then to be laid down in pasture for 10 or 12 years, after which it comes round again for woad.

*Manure.* The manures chiefly used in the fens are, the vegetable ashes arising from paring and burning, and common stable, or stable-yard, dung, which latter manure, till lately, was considered to be of no value by the fen-farmers, but rather an incumbrance; and I recollect an instance of its accumulating so much in a farm-yard here,

he farmer thought it more advisable, and did actually  
 ve his barn further into his field, or home close,  
 r than carry out his dung upon his land. Since the  
 has become exhausted of late years, by repeated crop-  
 it with oats, the manure is carried a little way into  
 elds, but the distant land gets none of it, which, if  
 ular system of farming were to be adopted, must have  
 ual share.

plements. The ploughs here used, are of the Dutch  
 not ill-adapted for this kind of land, except that  
 carry too wide a furrow, being too wide, and too  
 in their bottoms, which accounts for the fen-men  
 hing over so much land as 2 acres *per* day. A  
 h made in a similar way to the Norfolk plough, would  
 bly best answer upon this land, on account of its  
 occasionally set to an equality of depth ; independant  
 e ploughman's constant exertion, which is not the  
 with the Dutch ploughs.

w waggons are substituted for carts, the sides of which  
 ade to take out, or fall down, as occasion shall require  
 , to deposit the contents, or receive their loads ; and  
 node of conveying the requisites upon a farm, may  
 er as well as carts. All the other implements are in  
 ommon way, and need no particular description.

ck. Brood mares of the black cart kind, are used in-  
 of horses and oxen, which, from the ease with which  
 labour is performed by them, answer the purposes of  
 ulture equally well, and as they generally produce a  
 very year, which sells for 10 or 12 pounds, they are  
 oubtedly profitable ; but I can see no reason, why a  
 armer, might not extend his gains in this respect  
 er, by selling off his mares when they are advancing  
 ars, and supplying their places with young ones, in-  
 of wearing them out, which is the present practice.

*Seasons.*

*Seasons.* The seed time is prolonged, on account of the general wetness of the land in the Spring, of course the harvest is on that account delayed, about 10 days longer than on the nearest high land.

*Inclosures.* The fens are not yet completely inclosed. There are several considerable commons yet remaining open, but there is very little land in a state of common field.

*Commons.* The principal commons, are the East and West Fens, and Wildmore Fen.

These commons are situated a few miles North of Boston, within the Manorial perambulation of the Soke of Bolingbrook, held under a lease from the dutchy of Lancaster, by Sir Joseph Banks, Bart. and contain together upwards of 40,000 acres, viz. West Fen 16,924 acres, 2 roods, 6 perches; East Fen 12,424 acres, 8 roods, 39 perches; and Wildmoor Fen 10,661 acres, 2 roods, 25 perches. The number of towns within the Soke, having right of common in the West Fen, are 22; with falkage, turbary, fishing, and fowling. Eight towns of East Holland having similar rights with the Soke commoners of the West Fen, claim a right of pasturage only, upon the East Fen; which is accounted by the Soke commoners an intrusion, and will probably procrastinate the time of a division. Seventeen towns exercise a right of common on Wildmoor Fen, besides those towns which exercise a right of common on the other fens; so that it appears, that 47 towns claim a right of common on these fens.

These commons are under better regulations than any others in the fen country; which is probably owing to the directions of the respectable baronet, a considerable part of whose estate is situated near to them: yet they are extremely wet and unprofitable in their present state, standing much in need of drainage, are generally overstocked, and

p for turf and fuel. The cattle and sheep depastured  
 them, are often very unhealthy, and of an inferior  
 occasioned by the scantiness, as well as the bad  
 y, of their food, and the wetness of their lair.

se, with which these commons are generally stocked,  
 various causes, of a nature similar to those, which  
 be hereafter enumerated, with respect to Deeping  
 are often, subject to be destroyed.

s not a constant practice with the commoners, to take  
 their cattle off the fens upon the approach of Winter;  
 some of the worst of the neat cattle, with the horses;  
 particularly those upon Wildmoor Fen, are left to  
 the event of the Winter season; and it seldom hap-  
 that of the neat cattle many escape the effects of a  
 Winter. The horses are driven to such distress for  
 that they eat up every remaining dead thistle, and  
 id to devour the hair off the manes and tails of each  
 and also the dung of geese. A commoner, who  
 his own estate in the vicinity of these commons, and  
 es a hope of gain from them, in the fullest extent,  
 ntually not in a much better state than the rack-  
 r, in a series of years; for when 2 or 3 successive  
 ing Winters present themselves, he goes on adding to  
 umber of his stock of cattle and geese; then comes a  
 season, in which most of them, by various diseases  
 oned by a sudden and continued wetness, are swept

he drainage of these commons is very practicable, and  
 h would have been doubtless some time since effected,  
 her with a general inclosure of them; but, there are  
 reasons which have conspired to prevent the measure  
 adopted, and which may gradually wear away under  
 er explanations; and here I will endeavour to enu-  
 te them:

That the respectable baronet just mentioned, who is  
 edly considered the patron, and (if I may use the

expression) the father of this country, has been, till lately, so much occupied by objects of a more distant nature; and of more general importance to the community, that, probably, he has not had time to turn his thoughts towards this measure, however interesting it may be, in which a deal of investigation and labour is involved, to remove the prejudices of the commoners against a measure, which though, in the opinion of impartial observers, it would be highly and abundantly to their advantage, they have not been able to perceive it; and the humanity of this gentleman's nature, would revolt at an idea, of forcing upon them, the execution of a measure, absolutely beneficial to their best and most essential interests, against their inclinations.

2. The adjustment of the claim of the 8 towns of East Holland, upon the East Fen, ought to be compromised, and settled before any application to parliament should be made.

3. The expence of an application to parliament, and obtaining acts for apportioning and dividing the commons belonging to 47 parishes; and the after-division of such apportionments, amongst the commoners of each respective parish, might probably involve the proprietors of the whole, in the enormous expence of 47 acts of parliament\*; a very sufficient reason for the proprietors dreading the expence of the measure of inclosing the fens; and no indifferent proof, of the necessity for a general act to promote the inclosure of all commons, common fields, common meadows, and waste lands, in the united kingdoms, under such regulations and restrictions, as the wisdom of the parliament may devise.

\* The general act for dividing these commons, by the usage of the house, would be charged as 47 acts, and pay the fees accordingly.

fourth reason may be, that an equitable mode of the commons is not yet agreed upon.

It seems reasonable, that the commons should be left to the proprietors of the landed property, who have immemorially possessed them, by the depasturage of cattle in summer, as they could maintain upon inclosed land in winter, in a proportionate ratio with the numbers of commonable messuages, cottages, &c. It is perfectly absurd, that commons should be divided out to cottages, messuages, and toftsteads only, to which but little or no land is attached, and by the proprietors of which the commons could not, in any season, be either usefully or profitably occupied. Another consideration, which an agreement might properly be founded, previous to applications to parliament, is, in respect of a proportionment to those inclosed lands, messuages, cottages, which are contiguous to the commons, and the consequence of which situations the proprietors have the utmost benefit the commons could afford; such proprietors, upon a general division of the commons, are entitled to a much larger share in respect of the commons than those proprietors whose messuages, cottages, &c. are situated at greater distances; and, probably, from them, that they could derive no probable advantage from them, in their present state, and who never sold their rights to any extent, if at all.

5thly. The present scarcity of money in the country has so far affected some of the parties interested in this business, that they may feel it necessary to defer an enclosure till better times shall come.

*Drainage.* The drainage of these fens is not very difficult, and it will be attended with no greater expence than the land upon an inclosure can amply bear, without any inconvenience to the respective proprietors: but, as

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is



is the general case with all the low land which the sea has left, the lowest part of these fens is nearest the high land, and the greatest distance from the outfall; and these commons cannot be properly drained, without a catch-water drain under the high land, to take the soke and superfluous water, which would form a lodgement behind the commons, in a circuitous direction to the out-fall.

In making my survey of this part of the country, I had the honor of waiting upon Sir Joseph Banks, who favoured me with the plan of a portable barn, made use of at his Majesty's farm, at Windsor, which, as it is extremely well adapted for the fen country, as well as many others, I have, with Sir Joseph's permission, subjoined a sketch and account of it. I also saw, at his seat, at Revelby, an instrument for preventing the calves sucking the cows, which are intended to be weaned, when the cattle and calves are necessarily mixed. Never having seen the thing before, and admiring the utility and simplicity of it, I have with his obliging permission subjoined a drawing and an account of it.

I now proceed to mention those commons situated between the Welland and the Glenn, within the manors of East and West Deeping, which are held under a lease from the crown by his Grace the Duke of Ancaster. These commons are said to contain upwards of 15,000 acres; they stand very much in need of inclosing and draining, as the cattle and sheep depastured thereon are very unhealthy. The occupiers frequently, in one season, lose 4-5ths of their stock. These commons are without flint, and almost every cottage within the manors has a common right belonging to it. Every kind of depredation is made upon this land, in cutting up the best of the turf for fuel; and the farmers in the neighbourhood having common rights, availing themselves of a fine season, turn on 7 or 800 sheep each, to ease their inclosed land, whilst

cottage cannot get a bite for a cow, but yet the  
 in his turn, in a colourable way, takes the stock  
 as his own, who occasionally turns on im-  
 quantities of stock in good seasons. The cattle and  
 which are constantly depastured on this common,  
 very unthrifty ill-shapen kind, from being fre-  
 starved, and no attention paid to their breed.  
 the only animals which are at any time thrifty ;  
 frequently, when young, die of the cramp, or,  
 cked, in consequence of the excessive bleakness,  
 of the commons. A goose pays annually from  
 4. by being 4 times plucked. These commons  
 frequent resort of thieves, who convey the cattle  
 into counties for sale.

umber, holly, hazle, with the appearance of leaves,  
 s, and faggots of the tops of oak timber, set up in  
 with the skeletons of deer and other animals, have  
 y been found within three feet of the surface, by  
 who have made it their employment, with iron  
 to search into the soil for wood, which they after-  
 g out to considerable advantage.

the old ploughed land in the neighbourhood of  
 mmons, which have been repeatedly pared and  
 the ploughs frequently take hold of wood, and the  
 trees, where they had always uninterruptedly gone  
 at equal depth from the surface, during the  
 of man ; which is of itself a sufficient proof, that  
 and burning reduces the soil ; and such adjacent  
 land, which was considered higher than the  
 is, when first inclosed, is now 18 inches lower,  
 entirely occasioned by paring and burning ; for it  
 be presumed that the first cultivators of this country,  
 drowning, would begin to plough the lowest part  
 t ; nor indeed could it be accomplished, by reason  
 water, with which it remained overflowed.

Other commons are under a scheme of improvement, which will be hereafter noticed.

*Labour.* The price of labour is not fixed to any precise rules : when labourers are required, and the farmer's occasions are pressing, the labourer exacts the utmost he can get : and, on the other hand, when the farmer's occasions are slack, the labourer's wages are proportionably low. No part of rural œconomy requires regulating more than this ; but, on an average, the following statement is as near the price of labour as possible, viz. from the end of harvest, till hay time begins, the hire of a labourer is from 1s. to 1s. 2d. *per* day, and 1s. 6d. *per* day, from that time till the corn harvest begins ; and during the time of harvest, from 2s. 6d. to 3s. *per* day. No precise rule is fixed for piece-work ; for, if it is corn to thrash, the price *per* bushel much depends upon the state in which the grain was stacked, or embarned. If it is a ditch to make, much depends upon the strength of the soil, the season in which the work is performed, and the distance the soil is to be thrown, or removed ; and the same variations must be allowed for in every other part of the labourer's employment ; but, as the *fen* soil is generally much easier to dig than any other, 2½d. *per* yard cube is about the average price of ditching ; but a labourer, when employed in piece work, expects to earn at least 20d. *per* day in winter, and 2s. in summer, and in putting out work to them, this rule is generally adhered to and allowed : in all cases the labourer is supposed to work in winter, and in harvest, from light to dark ; and at other times of the year, 12 hours ; the employer allowing a reasonable time for refreshment. Women, when employed in weeding corn, are paid 6d. *per* day, and in hay time from 10d. to 12d. at other times of the year, they have no employment.

making is very indifferently performed, no partition being paid to it, as in the Southern country. In fine weather it generally lies in the swath, if not a thick crop, as the scythe left it, till it is considered to be made, and then it is turned, and prepared for the stack, but, if it is a thick crop, it is in some places broken up, to prevent the loss sustained in wet seasons, for want of turning it to the hay crops, is very considerable. A similar attention appears in making and finishing the stacks, which are very rarely topped up, pulled, or thatched, in any other manner to secure them.

*Provisions.* The price of provisions is nearly the same in other places of equal distance from the metropolis: Butter, pork, and beef, are nearly as dear as in London, deducting the value of the driving the animals to market. A more ordinary sort, not fit for the London market, is sold from  $2\frac{1}{2}d.$  to  $3\frac{1}{2}d.$  and  $4d.$  per pound. Bread, when purchased of the bakers, is nearly as dear as in London; and the poor have not the forecast to purchase corn, and to manufacture their own meal and bread, might be readily accomplished. The price of provisions is not likely to decrease. Not many calves are reared in this country, as they are chiefly reared, and the milk of a very indifferent quality, very little care being taken of their lodging or sucking. It is not an object of concern with the landed interest, that the necessitous labourers employed upon the respective estates should be provided for them comfortable habitations, and other accommodations, whereby they may keep cows, and produce necessary potatoes, and other roots for their families.

*Miscellaneous observations.* But little wood is to be found in any part of the country, except the willow.—The soil is tolerably good in summer; but in winter, as the materials

materials of which they are composed are very soft (being chiefly of moory soil and filth), they are then often very indifferent.

The farm-houses and buildings are generally very well adapted for the situation of the country, and generally well distributed.

The drainage of this part of the fens has been for a series of years very much neglected, and stands much in need of being better drained, which can be effected without a great exertion of genius.

## 2. STRONG, LOAMY, CLAYEY, AND MIXED, SOILS.

**MODE OF OCCUPATION.** As there is no distinction in the management of these soils, I have not thought it necessary to separate them under distinct heads.

These descriptions of soils are about equal parts arable and pasture, and nearly in 1-4th common-field, in the management of which there is no precise or specific mode. In some parts of the country, the common-fields are divided in 4 parts, in others 3, in others 2, the whole being very much mixed, and dispersed. The mode of cropping in those fields, which are divided into 4 parts, is in the following routine, or nearly so :

1	year fallow		fallow		fallow
2	wheat	or	barley		barley
3	beans		beans	or	clover
4	barley	or	wheat		wheat

those fields of 3 divisions, is the following routine of  
g, or nearly so:

year fallow		fallow		fallow
wheat	or	barley	or	wheat
beans		beans	or	oats

the foregoing modes of cropping are not generally  
ned, nor are the occupiers held to them by any par-  
rules.

HOSE FIELDS WHICH ARE EQUALLY DIVIDED,  
the customary practice to fallow a moiety of one of the  
for wheat and barley, and to let the residue of inter-  
lands lie the whole summer, which has, in the pre-  
year, produced wheat or barley, without being  
ed or sowed with any grafs, or other seeds, a very  
al crop of thistles is generally produced. In settling  
ts, and ~~felling~~ the land, under a specific mode of  
ement, upon Colonel Manners' estate, who has some  
common field land in Allford, in 1790, I persuaded  
upiers to sow clover with their barley and wheat,  
was impossible to compel general adherence to any  
which is not sanctioned by 4-5ths of the occupiers  
mmon field; that instead of a moiety of one field  
the whole succeeding summer, producing thistles  
clover might be had; this was practised for 2 years,  
off in 1783, and the reason assigned was, that in  
vious winter the sheep had been destroyed by a  
rot; and therefore the occupiers were disheartened,  
I not think it worth while to sow clover. The  
escape both mowing and hoeing; of course their  
re plentifully distributed. The land thus producing  
comes in routine in the succeeding year, to be sowed  
beans and oats. Hence it appears, that a moiety of  
ble land produces wheat, barley, oats, and beans;  
er moiety lies in a state of fallow, and producing  
thistles,

*letting*

thistles, as before described ; so that if this description of land were to be farmed according to the original intention of the occupiers, the soil *would* come in rotine to be cropped with the same kind or sort of grain every 8th year ; but from self-interested views in the occupiers, and from the supineness, or injudicious management of those who have the conducting of such concerns, this system is interrupted by sowing too large portions of oats, which brings the repetition of white grain crops (and particularly oats, the greatest impoverishment of land) to a shorter period. It might be said, by a cursory observer, that it is not probable, that an occupier should delay his own interest, by pursuing that mode of agriculture which is ultimately destructive of it ; but when it is considered how many indirect motives may draw a farmer from pursuing a line directed towards a permanent interest in the soil, it will no longer remain a matter of surprize : for instance ; a proprietor may have discovered a degree of instability in his conduct towards his tenantry, by raising their rents, already sufficiently high in the present state of the land, without granting leases, or pointing out any modes of improvement, or management, by which the tenantry may be compensated for such additional rent. A proprietor may have discovered some symptoms of extravagance, and a portentous apprehension may be afloat, that alienation of the property may take place ; and, last of all, the tenant's own circumstances may, from various causes, and amongst the foremost may be found a perseverance in a mode of agriculture, tending to keep him poor, and the land weak and foul, induce him necessarily to prefer immediate gain to future prospects.

And whether the arable land is divided into 2, 3, or 4, parts, the same practices are pursued in the repetition of crops of white grain, and particularly oats, tending to keep the arable land in a low and reduced state, it not being

productive as it might be made, if even the best was to be pursued, as before alluded to, which was fully laid down by our ancestors.

Drainage is very sparingly, if at all, pursued, and very seldom extended beyond the immediate intention of securing the crop that is growing, the occupiers not apprehending that the success of every crop depends upon the land being in every season, in a proper state of drainage.

Feeding sheep upon the fallows, in the common fields, is pretty general practice in the South and West part of the county; but on the North-East, and East, it is not pursued.

Connected with the common fields is a considerable quantity of unimproved land, which suffers considerably for want of drainage, which is the frequent cause of the rot in corn, and the dropsy, pheltrie, and various other diseases in neat cattle and horses.

*Commons.* The commons in the Isle of Axholm, furnishing some of the most fertile, strong, loamy, soils in the kingdom, may be here justly instanced. These commons and wastes contain upwards of 12,000 acres, which, if drained and inclosed, would for the most part, make very valuable land, being in considerable parts of a clayey nature; but, in their present state, they are chiefly covered with water, and in summer throw forth the coarsest productions: the best parts, which are those nearest the inclosed high lands, are constantly pared and burnt to produce vegetable ashes to be carried on them, in order to produce repeated crops of white grain. The more remote parts of the common are dug up for fuel.

On account of the general wetness of those commons, their being constantly overstocked by the large occupiers of contiguous estates, or in such seasons as the drenching is desirable in summer, to ease the inclosed

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land,



land, the cattle and sheep necessarily depastured thereon at all seasons, being those of the cottagers, who are for the most part destitute of provision for them in winter, are always unthrifty, and subject to various diseases, which render them very unprofitable to the occupiers.

*Common Fields.* The common fields of Epworth, Bilton, Flaxey, and Owston, within the isle, consist of a very fertile, strong, loam, the property in which is very much divided into many different small occupations. Potatoes, and every kind of grain, pulse, hemp, and flax, are indiscriminately and unsystematically cultivated. It is a common mode with the occupiers, to sow 5 or 6 successive exhausting crops (one of which is generally flax) without attempting to fallow the land, or throw any manure upon it.

When it is reduced to a state of beggary and rubbish, it is well covered with manure, and hemp is sowed thereon, of which it generally produces a great crop ; this smothers all other productions, and is the foundation of various other successive exhausting crops. Potatoes are here produced in great abundance, and of the best quality, and sent down the Trent, which bounds the Eastern part of the isle, to the London market. Upon the banks of this river, there is some very fertile, inclosed, strong, loamy, soil, producing abundant crops of every species of grain, pulse, potatoes, &c. There are also, on the Eastern side of the Trent, some thousands of acres of very valuable land in a state of common, extending along the Trent, from Stockworth towards Flixborough, which will well answer the purposes of draining and inclosing.

The drainage of the commons of the Isle of Axholm will not be a very difficult undertaking, provided the out-fall is made into the Trent, at a certain point, probably below Waterton. Hitherto the drains necessary to convey the

to the Trent from Hattfield, otherwise Hatfield, and adjacent country on the Yorkshire side, have been carved over the isle commons into that river too high up, the way of the Trent floods, which override the hedges and goats, and which operate at present as a bar to the improvement of the drainage of the commons; and by authority of parliament, a canal has been made in a similar way across them.

I am informed, that the isle commoners are empowered, by clause in the act, to drain their commons by means of a canal, to be laid under this canal; but, during the time of the improvements of the adjacent county were complete, the isle commoners have been unfortunately dormant, and have greatly delayed their interest, in not draining their commons, by means of a competent general cut, down to the lowest possible outfall that could be obtained, which they have received, by side cuts, all the water from the north side, and the Yorkshire side; and which would serve to clear out, and deepen, such general cut, not only in the present, but at the outfall. A bill is intended to be introduced into parliament, in the next session, for an inclosure and division of these commons, and the preliminary mode seems to be on the eve of being settled, viz. to give 1-20th part to the lord of the soil \* 1-20th part for that right; 1-10th to the owners, 1-10th; and 2-3ds of the residue to the owners of common right houses and cottages; and the remaining third part to the owners of lands, having common right houses and cottages.

This mode of dividing the commons seems to be a compromise to prevent farther opposition, and not adopted

Mr Carteret is lessee of the manors of Epworth cum Westwood, and under the crown: I had the honor of regulating the husbandry to be pursued upon this estate, which is chiefly inclosed land, and which I found to be in a state of destruction. The covenants, by which the tenants hold the land, are of a beneficial nature, both to landlord and tenant.

altogether upon a principle of equity, because the owners of the land have certainly time immemorial occupied the commons in a larger extent, and in proportion to the stock they kept in winter; whilst the mere cottagers, for want of provision for their cattle in winter, as well as from the general unprofitableness of the situation and mode of occupancy, have kept a much less proportion of stock than the occupiers of messuages and lands.

*Inclosures.* The inclosed estates, which are chiefly in the hands of large proprietors, anthills, bushes, rushes, and water, occupy a very considerable part of the pasture land, which is not half so productive as it might be made, even if it was to be continued in a state of pasture; a portion of this inclosed land is under the plough, probably such quantity may extend to 1-4th part, but few farmers have a sufficient quantity of ploughed land to enable them to go on systematically, in procuring green winter food, and artificial grasses, &c. if they were inclined to do so; but the quantity of ploughed land is considered, by the proprietors and agents, as so much devoted to destruction; and, upon this description of property, the tenants are under no restrictions, except as to the not ploughing up ancient pasture land. Upon tracing back the former usage of this property, it appears to have been the practice, as it is in the present day, for tenants to obtain permission from those into whose care the management of the property has been committed, to plough parcels of the pasture land from time to time, under assurances of laying land down again, for pasture, parcels of arable land, which have been heretofore under the plough; but as there has not been any stipulated proper mode, in which such land should be farmed, whilst it continued under the plough, or in what state it should be again laid down, the common practice has been, and now is, to raise successive crops of white

until its nature is not only exhausted, but filled with  
 and rubbish, and then it is sowed down with grass  
 repair itself by rest; and a common excuse for this  
 is the most absurd of all possible excuses, viz.  
 as seeds had been sowed with the corn, when the  
 has been lusty, or in a richer state, the seeds would  
 been choaked by the luxuriance of the crop." There  
 cannot be a greater absurdity, than that of exhaust-  
 land with repeated crops, and thereby making it  
 and foul, at the very precise time when it is to be  
 down, and when a foundation ought to be laid for  
 and good condition for ages; and this practice  
 traced, in almost all the pasture land, which has been  
 ed within the present century, so that it is not the  
 face we are given commonly to behold, but a foul  
 guising mask.

Very little attention has been paid to the pre-  
 on and improvement of the live fences, so that old  
 stumps of white thorn, and gaps or vacancies, may  
 covered in almost every hedge. Plashing, or laying  
 the live fences, has been very improperly performed,  
 generally they grow too long before this necessary  
 is set about: live stakes are left in the hedges,  
 necessarily produce young shoots from the top of the  
 instead of their root; the fences on this account  
 thin at the bottom, where they otherwise would be  
 the thickest; and the fences, from this improper  
 ent, and from the want of proper back or guard  
 fall to decay; besides, if the fences were to grow as  
 ble from the top of the stakes as they would from  
 roots, yet, from these circumstances, the land is  
 by the whole length of the stakes more than it  
 be, which delays a farmer's interest.

And

And so little effect, in this particular, has the force of example, that I lately observed, when looking over the estate of Sir William Manners (the manor of Silk Willoughby, near Sleaford), the fences upon one of the farms appeared in excellent condition, being plashed in the best manner; and I also observed, that no other farmer in the parish had attempted the like: this observation led me to suspect, that Mr. Tagg, the tenant, came from some distant county: upon enquiring it appeared, that he is a native of Derbyshire, but has been settled in this parish many years. The common excuse set up by farmers, for leaving live stakes in the live hedges, when plashed, is, that the poor constantly draw out dead ones for firing; but, if this absurd doctrine had any weight, it might apply as a reason for not keeping poultry and pigs; and so it would, if they were not better looked after than the hedges.

But, as it is necessary for the farmers and graziers interest, that the live stock should be kept separate, dead fencing supplies the place of the live, which is an eternal expence to the occupier, in a double ratio, viz. in first providing fencing-stuff, with the carriage of it, often a considerable distance; and, second, in the delay of his interest, by reason that the land occupied by a dead fence might sustain a live one, which would be not only answering the first intention, but growing, and yielding a necessary crop of some profit.

*Miscellaneous observations.* Wood land is for the most part cleared in routine, and the underwood cut, without the vacant places being supplied with young plants, of such kinds of wood which is best adapted to the soil, climate, and uses of the country, the woods of Sir Peter Burrell, under the judicious management of Messrs Cluttons, of Cuckfield, Sussex, and some few others only excepted.

m buildings are not generally placed in central  
as, and, for the most part, the farms are deficient  
conveniences, which are necessary in a due cultiva-  
the land.—The inclosed parcels of land, are not laid  
equal size, to admit of systematic farming or grazing.  
are not generally folded in the common fields, or  
re.

ever apprehends, that the occupiers of a common  
e necessarily tied down, to any precise mode of  
ment, by the custom of any parish, are grossly  
n; for each occupier is only under an obligation to  
ers, not to break up any of the commonable land,  
part the regular field or apportionment of fallow; to  
s ditches and water courses; not to suffer the  
nd weeds to be sowed upon his neighbour; and to  
e field according to the practice of the parish: in  
r matters, he may drive the land, and force it totally  
heart; first, by negligence in fallowing; and next,  
ng wheat upon all his fallowed land, which should  
led between barley and wheat; and in sowing oats  
sion to wheat or barley, instead of beans; and, in  
mismanagement, he does not infringe upon the  
of his brother farmers: but it has frequently  
d to me in practice, that some of the occupiers of  
on field, are pursuing the best possible mode of  
ment the situations are capable of, whilst others are  
g land, intermixed therewith, to the lowest state of  
, beggary, and rubbish, making the respective  
of the inheritances to vary 3, 4, or more, years  
e; and upon the inclosure of common fields, it  
tly occurs, that commissioners are obliged to con-  
ch worn-out land, of considerably less value than  
arts as have been well farmed; of course the pro-  
s, whose misfortune it has been to have their land  
occupied, have had a smaller share, upon the general  
division

division of the property, than they otherwise would have had, in case their land had been better farmed.

No drilling, hoeing, or dibbling, is pursued in the common fields, but in some instances sheep are turned into the beans, to eat out a part of the weeds; but this is a miserable substitute for properly hoeing, thereby destroying weeds, and mouldering up the plants, and profitably employing and bringing up the infant poor in agricultural pursuits, of which the country stands much in need.

Very small portions indeed, of inclosed land, are drilled and hoed, and I know but few instances where it has made any considerable progress. The farm of Mr. Henry Hoyte, of Osbornby, near Folkingham, stands first in my estimation, as a spot on which the best husbandry, with the best application of the produce of the land, by means of the best stock, are united. Mr. Hoyte has drained the soil to its exceeding improvement, and introduced the most judicious modes of drilling now in practice, and of which, with his judicious choice of stock, I shall have occasion, hereafter, most deservedly to enlarge upon. Except in the foregoing instance, I have not been able to find any turnips completely and systematically cultivated\*, and properly hoed; but it occurs, that the interest of the occupiers, for want of attention to this necessary process, where this excellent winter plant is cultivated, is generally delayed, from 30s. to £ 3 and upwards *per* acre.

Men of independent fortune, in whatever rate their possessions extend, and their estimations of such gifts made, are too much engrossed in those pursuits, which are the

\* Mr. Hoyte refused £ 10 10s. *per* acre, in 1792, for his drilled turnips; and he made £ 12 12s. *per* acre by the common rate of agistment of his own stock. He is a tenant to Lord Brownlow; and, although he has not a lease, he has implicit confidence in the noble lord, that he will not avail himself of his expensive improvements, and to make him, by an untimely advance of rent, pay a second time for his exertions.

it, to strike out into schemes of improvement in  
 re; and this task has been generally consigned to  
 those circumstances are more craving, and with  
 the spur of necessity becomes the mother of inven-  
 it is unfortunate for the public, that in the pro-  
 schemes of improvement in agriculture, which, if  
 and properly pursued, would certainly be attended  
 cess, from a variety of circumstances, their progress  
 with unexpected delays, hence the prejudiced and  
 improperly exult, and are more confirmed in  
 urdities \*.

an unfortunate instance to verify this remark in Mr. Walker, of  
 near Grantham, who, till lately, was carrying on a great  
 excellent husbandry and stock, but he became concerned in a spin-  
 oe, which failed of success; and this worthy man's misfortune is  
 ted by many, to the having adopted schemes of agricultural im-



### 3. THE WOULDs, OR LIGHT LOAMY, AND SANDY SOILS.

**MODE OF OCCUPATION.** This description of property was formerly for the most part devoted to rabbits, the residue as open common fields; but within the last century, nearly the whole has been gradually inclosed, and brought into tillage, and occupied as arable farms; which are generally in the hands of large occupiers. The tenants are rarely under leases, or bound by any rules to enforce good management; and of course, the interests of landlord and tenant are not defined, or in any degree preserved from militating against each other, by regular well-digested systems of farming, laid down between landlord and tenant, in pursuit of the best practical modes of husbandry, which have been adopted upon soils of similar natures.

On this account, we find the generality of the land poor, weak, and foul; made so, by repeated crops of white grain; and which procedure having been long continued, of course the means of producing the common manure to reinstate the land, have gradually decreased; and it is not an uncommon thing, to find very considerable tracts of land, by such means, reduced to a state much worse, than it was in when cultivation was first began, or when the inclosures were first made; and it is now considered, as only fit to be turned again to its original mode of occupancy, in rabbit-warrens; and which is, in many instances, adopted.

The reason why farms are now generally large, and have increased, is not always from the growing opulence of the farmers, but probably from the land being reduced so

in its condition, that it requires that they should occupy a large quantity of it, to afford them a

As no systems of farming are laid down upon fertile soils, no particular courses of husbandry can be found; but the best to be found is somewhat like the following:

very indifferent summer fallow: turnips badly sown, or not at all, and fed off with sheep.

Barley, or white oats.

Wheat, if the land will bear it, if not, any thing it will bear, or grass seeds.

Grass seeds, or oats, if the land will bear a crop, with artificial grass seeds.

Turnips are cultivated in this part of the country very sparingly, but, for the most part, the fallows are ill-prepared for them, and they are very badly hoed, or not at all. Much neglect, from 20 s. to £ 3 per acre, in the value of the crop, is generally lost; and more, if we estimate the loss of manure they would afford.

A curious observer might remark, that the introduction of turnips and artificial grasses, was an improvement of it; and he would farther say, that the country of Scotland was improved by the like means: and so it was in some respects; but that was not all; gentlemen of landed property were not there shouldering the wheel.

The bowels of the earth are but rarely searched into, for the means of improvement of the surface.

Plants are in a very indifferent state, live ones have been generally replaced by dead ones substituted for them; the expence of which, and the loss of the farmer's interest therein, has been heretofore pointed out.

Timber, or wood, is here cultivated.

Natural grasses are rarely sowed upon the first crop, after a fallow, nor are they fed off; therefore, their most profitable uses are lost.

They apportioned their estates in regular divisions, and subdivisions, making their farms of various sizes, to suit the circumstances of the tenantry. They assisted them in searching for the means of improvement in clay and marle; they joined in the original expence of raising it, and spreading it on their land, and they encouraged the tenants to persevere, by granting them leases for not less terms than 21 years: and for the interest of the whole, as well as each part, they regulated proper systems of farming, adapted to the strength of each respective situation and soil. They took care for themselves, that their tenants should have every profitable use, but commit no abuse upon the property; in fact, that they should keep up the heart, and good condition of the land, with which, from time to time, it was impregnated.

The agents employed upon the estates, are trained up in the regulated systems, and know how properly to relax the occasional hardships, which the tenantry might suffer, from the vicissitudes of seasons, and by keeping them up to the strict letter of their leases, without injuring the landlord's interest: and after this statement, no one who is conversant with the general management of the Wolds of Lincolnshire, will yet ask, why that country is not cultivated in a manner equal to the county of Norfolk.

*Buildings.* The buildings upon the Wold estates, are not placed in central spots; but the farm-houses are generally on the lowest situations; originally placed there, with a design to shelter the inhabitants from the cold winds.

And there are generally evident marks of a decrease of population, from the number of decayed farm-houses; whilst it appears, that in various situations, one or two opulent farmers, skim over some thousands of acres, formerly occupied by more inhabitants; and there cannot be a greater proof, that agriculture has not abundantly improved in

untry, than the decrease of the number of its inha-

*el.aneous observations.* The generality of the Wolds in Lincolnshire, might now be made more valuable to the owners and occupiers, if the soil was in the precise state, the most considerable part of it was found 50 years ago, and now to be laid down, under well-ordered systems of farming, than it is possible to be made in the present reduced condition, for a very considerable part of time: the land having been broke up, or pared and burnt, and ploughed, without restrictions, until it is exhausted.

How little did those proprietors understand their own interests, who permitted their tenants, without restraint, to pare up, or pare and burn the turf of rabbit warrens, and lay the land, in a state of antient pasture, upon the delusive prospect of an advance of rent, by which procedure, the land was injured in a tenfold ratio, and who could be refused at last, under an idea, that, if the tenants who thus overploughed the land, stocked it again with sheep, no damages were incurred. Setting aside a delay in the progress of agricultural improvements, it must follow, that soil, which is exhausted for one purpose, is equally exhausted for another. By this mode of plunder, and this kind of abuse in the occupancy of landed property, there are several men in this country, who have acquired great fortunes.

I cannot make a calculation upon the annual value of a rabbit warren (never having been concerned in the occupancy of one) other than considering it with a view to its preservation; and if the occupiers will not give more rent for the land in that state, than in any other, I should be inclined to destroy them; rabbits being injurious to live fences.

fences and mounds, and to a well-cultivated neighbourhood.

The improvement by means of flooding the land at pleasure, is not practised in this part of the country, nor are there many considerable spots upon which it could be brought to bear.

It is in very rare instances that lime, marle, or clay, are sought for, or used, or any other manures than those which the common stable, or fold-yard, afford : but I am of opinion, that both marle and clay may be found in very advantageous situations, and capable of being applied to very great advantage.

The implements of husbandry here used, are of the sort most general in the kingdom. The ploughs are too wide and too long in their bottoms, and bear no proportion in point of execution, with the Norfolk wheel plough.

Oxen are used in a considerable portion of the labour, and are found to answer in point of advantage, to the occupiers.

There is but a small portion of this description of land in a state of common field, and what remains, is, for the most part, under contemplation of inclosure.

*Inclosures.* The advantages here resulting from inclosures, have been chiefly the laying the land together ; which, in a state of common field, was very much mixed and dispersed.

An increased annual payment has been made by the tenants, on account of such inclosures ; but, for want of proper systems of husbandry being adopted, in many instances, the value of the inheritances have not improved, otherwise than by the land being laid together in a more contiguous manner, as before-mentioned.

The principles upon which the business of inclosing is performed, is not generally a good one.

In

by inclosure-bill the commissioners are required to consider the lands to be inclosed, with due consideration to quantity, and contiguity. Whether from mistaking the meaning of the latter word, or from paying too much regard to the situations of the farm-houses already erected, it only occurs, that the contiguity of the land to be allotted to each respective house and buildings, is more insisted on than the general connection or contiguity of the allotments in a square manner, so that in those situations where the village, the property is jumbled together in a manner not profitable to all parties concerned ; and the large proprietors are obliged to travel to their allotments, carried in carts or on horseback, to a considerable distance.

It would be more desirable for all parties interested, that the distant parts of the parishes to be inclosed, should be detached in the first instance, and for the allowances to be settled by the commissioners, for the erection of new buildings in central situations, whilst the proprietors, whose estates are allotted to their houses in the villages, would have all their lands allotted to them, at a rate proportioned to the advantages so to be derived. For the first great benefit resulting from an inclosure is contiguity ; and the more square the allotments are made, and the more central the buildings are, the more advantages are derived to the proprietors in every respect.

The population has certainly decreased in this county for want of an introduction of the Drill, and systematic husbandry ; and from the lands being laid out in large farms.

*and term for removal.* The feed time and harvest is later than in the more Southern districts, not only from its being farther North, but from mismanagement in not getting the seed, or the Spring crops, sufficiently

sufficiently early into the ground, which is in many places delayed till May. And upon many estates here, and in other parts of the county, this is the customary time for quitting, and entering upon farms, which is a bad practice, for if it is arable land, it is too late to put the spring seed in the ground, if it is meadow, clover, or seeds for mowing, it is too late to lay in the land for that purpose. If it is artificial grasses, or pasture, being fed off bare (for tenants, who are here going off, seldom leave any thing behind them) the interest of the incoming tenant is extremely delayed.

And wherever the following custom prevails, it should be abolished, viz.

For the incoming tenants to enter upon only the farm-houses, pastures, meadows, and fallows, at the time the tenancy, and the whole of the rent commences: the outgoing tenants taking the crops of grain, pulse, &c. in that year, and embarning them on the premises, and keeping possession of the barns and stack-yards until the Midsummer twelve-month, after they cease to pay rent, in order to thrash out and carry away the corn. In other instances more barbarous, though more rare, it is customary for the outgoing tenants to sell all the last year's crop in the straw, at harvest, to the public, to be carried off the premises. Of course, the incoming tenant adheres to the custom of his entry, when it is his turn to quit, &c.

*Labour and provisions.* The price of labour is nearly the same as herein before stated, with respect to the first district of this county.

The price of provisions also, is nearly on a par, for although this part of the county is farther from the metropolis, excellent constant markets for fat cattle, and sheep, are found in the manufacturing towns of Yorkshire, whither they are, in large quantities, driven; and here the

of butchers meat is likely to increase; but that of  
 would a little decrease, if the country was to be  
 cultivated, and the poor were to manufacture their  
 meal, and make their own bread. And I recommend,  
 those gentlemen, who are interested in the welfare of  
 parish, would induce the farmers to sell, and the poor  
 chafe, their corn, at the first hand; and to convert  
 meal, by means of excellent mills, made for such  
 use, by Stockdale, of Holborn, London. And if  
 attention in this country was to be paid to the excel-  
 sh, the neighbouring sea coast affords, the poor, as  
 the public, might be greatly benefited: but at pre-  
 there are very few fishermen on the coast.

*roads.* The roads in this country are tolerably good,  
 but nice attention being paid to them, except in  
 r, when attempts are often made to repair them.  
 are certainly capable of being improved at no extra-  
 ry expence, provided the best materials the country  
 s were sought for, and duly applied, in a proper  
 t.

*ring and burning.* That practice is not so common, in  
 part of the country, now, as it was formerly\*; and  
 it has been done, evident marks remain of the in-  
 the land has sustained by it.

*improvements.* There are undoubtedly some good far-  
 in this part of the country, and men who are well  
 ing of imitation; and I am sorry to add, that the  
 of example only, is not alone sufficient, to bring the  
 ality of farmers, into more advantageous modes of  
 culture.

the difficulty of getting any turf or herbage, to produce vegetable ashes, is  
 of reason of this delay.

G

Mr.



Mr. John Codd, of Ranby, a very spirited and judicious improver and breeder of sheep and cattle, as well as a promoter of agricultural improvements, has used Mr. Duckett's drill machines, and other implements of husbandry, very profitably, for some considerable time, without their being much sought after by the farmers of his neighbourhood; many of whose modes of occupancy, are the most unskilful that can be conceived.

If it was not much more the design of this publication to state the general agriculture of the county, than the particular instances of good management, I could enumerate several proofs of it; but, as at least 9-10ths of the agriculture of this large tract of country, is barbarous in the extreme, I am certainly justifiable in representing such to be its general state, without giving offence, which is the furthest from my design.

#### 4. THE LOWER MARSHES,

that description of low land which is protected from the overflowing of the sea by embankments.

part of the county is supposed to contain above 6000 acres; and, as before observed, extends along the coast, from the Humber on the North, to Cross-Keys on the South. The most considerable part of it is in a state of pasture, and of a very good quality for feeding, or fattening, cattle and sheep; but not much is used for breeding, for which purpose it is not well adapted, nor could it be so profitably applied \*.

The Southern part is more used as arable land, than the Northern part, towards the North, but no regular system of husbandry is pursued. Very little land is here let under lease, and no precise rules for management observed; but it is cultivated in a manner similar to the fen, in respect of repeated crops of white grain, except that the destructive practice of cutting and burning is more sparingly pursued. In considering the husbandry of this part of the marshes, I pass over the parish of Long Sutton, without observing, that the former commons, belonging to this parish, and about the inclosure of which so much opposition was made in both houses of parliament, have turned out very profitable to the parties interested, beyond all calculation of advantage, even of those who brought forward the bill: the animosities having subsided, the former contending parties sit down peaceably, enjoying the harvest of a well-cultivated field; the land producing immense quantities of

\* The lambs would be drowned in the ditches, &c. &c.

corn, hemp, flax, woad, and every valuable production. And all this alteration, much for the benefit of the country, though so violently opposed, was carried into effect, by the perseverance of one spirited proprietor, viz. Joshua Scrope, Esq. the Lord of the Manor, upon the petition to parliament, of the smallest majority of proprietors, ever known under similar circumstances.

Farmers who took undue advantages of the commons, by hiring common-right houses, and, under colour of such rights, turning upon the commons 7 or 800 sheep in a season, and thereby eating up the poor cottagers rights, had address enough falsely to represent the case, and to prevail upon their landlords, and others in power, to support them in this violent opposition. This inclosure has been followed by that of the adjoining commons of Tydd; and some thousands of acres of common, in the parish of Whaplode, Holbeach, and Fleet, being in this neighbourhood, are now under notices for a bill of inclosure, to be supported by Lord Eardley, who is a lessee under the crown for considerable estates in one of those parishes. But, whilst I contemplate the vast advantage arising from the inclosure of the commons of Long Sutton, I cannot but observe a considerable quantity of land in that lordship, which was originally gained from the sea, and was, in the first instance, as productive and valuable as the late inclosed commons, but which, by a series of exhausting crops, and every species of mismanagement, is reduced to a very low condition. And, I fear, the late inclosed commons of Long Sutton are under a similar treatment; and, unless the plough be restrained, and a well digested system of husbandry adopted, we shall, in the course of 10 years, see this amazing productive track of land, in such a state, that it will no longer bear exhausting crops of grain, laid down for pasture, probably of but little more value to the individuals immediately interested.

to the community, than it was in its state of  
on.

embankment, of many thousands of acres of salt  
fronting the parish of Gedney, and its vicinity, is  
g into effect, which will be of infinite advantage to  
proprietors, and the community.

Drake, Member for Amertham, is a principal pro-  
of this undertaking, by his judicious agent, Mr.  
of Fulham.

great scheme of improvement, by means of a cut, for  
inage of the lands in South Holland, and parts ad-  
to a competent outfall in this district, is now car-  
into effect.

a matter of great public concern, that in every  
of drainage, the interior parts of the country  
be brought into the measure on the outset; for, by  
acting works for drainage, nearest to the outfall, in  
instance, they are often found afterwards to be in-  
tent to effect the general good; by reason of which,  
ex-pence is incurred, of which more than a moiety  
have been saved in the first instance, as well as the  
improvement of the country effected, instead of a  
one.

drainage of the manors of East and West Deeping,  
their extensive commons, might, probably, be found,  
proper survey, to be effected in the direction of the  
t, by proper tunnels laid for that purpose, under  
er Welland, &c \*. But those manors are held by  
ce the Duke of Ancaster, under a lease from the  
, which is nearly expired; and, unless his Grace  
renewal of it, for a competent length of time, in  
he might be at least repaid the expences of such an

not speak with precision on this subject, not having been employed  
minute investigation, by levelling, &c.

under-

undertaking, it is improbable that he should promote it.

As we proceed Northwards, the marshes stand very much in need of a better drainage, and for want of which the most profitable use of the land, in Summer, is very much delayed; and in Winter, almost denied.

The sewers and drains, which ought to be competent to conduct the water immediately from the high land to the outfall, at all times, as well as the outfalls themselves, are too much cramped or confined, and a false principle in drainage, by long custom, is established, viz. not to open or cut strait the sewers and drains nearest the high land, lest the water should come down too rapidly, and be forced over their banks, in its way to the outfall, where it cannot get away fast enough, to prevent the drowning of the intermediate lands.

The sea banks, according to the law of sewers, ought to be repaired and amended from time to time, by the occupiers of lands in the frontage towns; and whenever any banks are necessarily to be erected, the whole district is chargeable therewith; and it is customary to charge the expences by an acre-tax, and not according to the yearly value of the lands, which is certainly, in many instances, where the value of the lands vary, extremely oppressive. But it sometimes happens, that well-timed applications of a small expence, in the due repairing of parts of the banks, might be the means of supporting them for ages; but it is not always considered the interest of the occupiers of frontage towns, to repair the banks thereof, and they would rather, in some instances, when they become very bad by neglect, render new ones necessary, to the expence of which they would only contribute a proportionate share with an extensive district.

It is not a custom for gentlemen of extensive landed property, who are most interested, (Sir Joseph Banks, and a

mer gentlemen, excepted) to attend the meetings of  
 officers of sewers, and to take the necessary views in  
 part of the country; and, therefore, the business of  
 drainage, in which the preservation and even salvation  
 of a rich and fertile country is involved, is too frequently  
 committed into execution, upon the votes of those gentlemen,  
 who are not well versed either in the laws or customs  
 which ought to be observed; nor possessed of that practical  
 knowledge, which a decision upon objects of so much  
 importance requires; for, however skilful the officers em-  
 ployed may be, it ought not only to be a satisfaction to them,  
 that their judges understand their demerits, but a great  
 relief from the responsibility and ill-opinion of the country,  
 in cases of miscarriages that might occur, which no  
 foresight could prevent, would thereby be taken off  
 their shoulders.

A work of considerable importance, in the bank near  
 the town, was lately blown up by a tide; which, in the  
 distance, recently cost the country from 1500 to 2000*l.*  
 which is now to be replaced in a more skilful and sub-  
 stantial manner. More discernment in the commissioners,  
 or their agents, might probably have prevented, or  
 at least reduced this expence unnecessary.

It has, in some instances, been a practice, in erecting  
 new banks, to retreat some way from the sites of the  
 old bank, as if such retreat was giving a degree of ease  
 to the pressure of the water. This measure ought not to  
 be attempted, but in cases of extreme necessity.

It should rather recommend the standing firm to the  
 sites of the ancient banks, until the sea shall so far gain  
 upon the shore, that the whole works must necessarily be  
 abandoned, for new ones, in a more remote situation.  
 The sea certainly gains upon some parts of this coast, and  
 retreats from other parts; and in the frontage of the parishes

of

of Summercotes and Marth Chape, some thousand of acres of salt marshes may now be safely embarked from the sea.

*Roads.* The roads on the South part of this district are, for the greatest part of the year, in a good state ; but, in the middle and North parts, they are nearly impassable in Winter ; in which season it is a practice to attempt to mend them, as well as in other parts of the county, which requires no comment.

# GENERAL REMARKS

OF THE

## HUSBANDRY OF THE COUNTY.

FROM the statements hereinbefore made, it must appear, that agriculture has not generally improved in this county of late years; but, I rather fear, has been on the decline: for if we refer to the usage of the common fields, we contemplate those which were originally divided into three parts, one field being annually fallowed, and in succession sowed in moities, with wheat and barley; and the second season, or what is commonly called the breach-crop, was sowed in moities of beans and oats. It is very evident that these fields were first so arranged by our ancestors, with a direct view to a system of farming, and that system was the best that then could be devised. The uses of green winter roots, such as turnips, coleworts, or cabbages, now so advantageously cultivated upon the fallows, were not then understood; and the only part of husbandry, which was in itself bad, was the sowing of the 1-6th part with oats, upon a white grain sward.

Every one who understands the least of agriculture, will see, that the original intention of our ancestors was, with respect to the division of the land, into three fields; and by their respective equal divisions in the particular crops of grain they were to produce, to keep off the repetition of the same sort of grain, or pulse, to every 6th year, as follows:

H

1st. Field



1st. Field fallow.

2d. To be sowed equally with wheat and barley.

3d. To be sowed equally with beans and oats, and in rotine, that particular sixth part, which in one course of husbandry produces wheat, shall, when it comes round again to be fallow, be sowed with barley; and, as to the breach crop, in the same course of husbandry, that part which is sowed with oats, shall, when it comes round, be sowed with a breach crop, again be beans.

The foregoing course of husbandry is more strictly attended to, upon the poor thin stapled clays in Cambridgeshire, than in any other county; for there, if any infringement is made upon this order of cropping, by the farmers sowing too large a portion of the fallow land with wheat, which ought to be barley; or too large a portion of the breach, or second crop, with oats instead of beans, either of which practices, which bring on a succession of the same kind, or sort, of white grain; to every third year, instead of every sixth, tend to exhaust the soil, and are there called cross cropping; and where the ill-effects of it are frequently seen for two successive courses of husbandry, although the best management shall afterwards be adopted and pursued.

Ill effects of the like nature attend this practice in every place; but where the soil is good, they are not so immediate and striking. The same intention towards a regular system of husbandry, may be observed, where the common fields are divided into four parts or seasons, viz.

1st. year	fallow	} or {	fallow	} or {	fallow
2	wheat		barley		barley
3	beans or peas		beans or peas		clover
4	barley		wheat		wheat

Wherever oats are substituted for beans or peas, the original intended system is destroyed, and the land is exhausted, and made poor and foul.

original design towards systematic farming, though barbarous than either of the foregoing, may be diffused in those common fields, which are divided into three parts: that is to say, one field being annually in an unproductive state, as before described, in a former part of this publication: but briefly as follows; a moiety of the unproductive field is in a state of fallow, being ploughed three or four times, as preparatory for wheat and barley, in equal parts: the other part of this field lies with the lands in fallow, producing thistles and all weeds, which are seldom hoed or mowed, and shed their seeds over the whole.

The second field, or a moiety of the whole of the arable land, produces wheat, barley, oats, and beans, or peas in three parts, in alternate succession.

1st. year	wheat	5th year	barley
	thistles	6	thistles
	beans or peas	7	oats
	fallow	8	fallow

When it comes again in rotine to be sowed with wheat and fallow: hence it appears, that the lands come round to the same system, to be sowed with the same kind, or sort of seed, in every 8th year; and this system is commonly instituted, and the land impoverished, when too large a portion of it is sowed on the fallow, with wheat, instead of barley; and oats supply the place of beans and peas. It is this course of husbandry, with respect to Alford, and the common fields, that I recommend clover to be invariably sowed with wheat and barley, as long as the common fields remain unclosed, by which means excellent depasturage for sheep, upon that nutritious grass, would be produced in the 4th and 6th parts of the course, instead of thistles.

If those gentlemen, whether proprietors or agents, who have any concern in the management of common fields, will examine into the present mode of occupancy of the different classes of them, as here stated, they will in most cases find them in a weak impoverished state; and that the original systematic farming of them, is either lost or laid aside, and that the agriculture of the common fields of this county, has rather declined than improved, in the present century.

The agriculture in the inclosures, according to the foregoing statements, cannot have improved, whilst the occupiers have been either under general restraints from applying the soil to its right use, and thereby under insuperable bars to cultivation, with respect to pasture land, which remains in a state of nature; and whilst, with respect to the arable, they have been at liberty to plough and sow it without system, and without restraint. Yet, I must freely admit, that by means of inclosing common fields and waste lands, the science of agriculture advanced the first step towards improvement, but there it has, generally speaking, remained, without making any additional progress.

## LIVE STOCK.

**OF THE NEAT CATTLE.** The neat cattle of this county are, for the most part, of a large sort. The cows, when fat, weigh from 8 to 9 hundred weight; the oxen from 10

They are generally large in the head, horns, bones, and muscles; thick, short, and fleshy, in their necks and shoulders; narrow in their hips, plates, chins, and bosoms; and in their rumps, and their shoulders not well covered; their eyes small and sunk. Those bred in the common fields are, from 3 to 5 pounds *per* head, of less value, at 4 years old, than those bred in inclosed parishes; and this difference may be attributed to a neglect of shape more than to size, and it may be fairly presumed, that the ill-shapened cattle consumes as much, if not more food, than those that are made with more symmetry.

And, whilst I am stating this to be the description of the quality of the neat cattle of this county, I must, in justice to Mr. Tyndall's breed, at Ewerby, near Sleaford; and to Mr. Hoyte's at Osbornby, near Folkingham, declare that to be the reverse of the foregoing description; and, that for true symmetry of shape, lightness of bone and offals, weight of carcase, and aptitude to become fat, they are every breed I have before seen in this county: and I am of opinion, that this kind of cattle will be found every where to be inferior, in point of agility, to horses, in the cultivation of land.

The pasture land of this county is not much used for the breeding of cattle; and the art of making good cheese and butter is generally understood.

The

The reason given for this delay of the interest of the occupiers, is imputed to the general good quality of the land, which is said to be too rich to produce those articles in perfection, an inference drawn, I fear, from false premises, viz. that, upon poorer soils, those articles are generally good; whilst the contrary is here found. I should rather apprehend, that the same cause for the delay of improvement in this particular exists, which is found in most other respects, viz. that the general fertility of the land is, in the minds of the occupiers, considered to supersede the apparent necessity for personal exertion; whilst, upon poorer soils, the occupiers are, in a great degree, driven to supply the deficiencies of nature by industry.

An evident want of cleanliness is too frequently discovered in the dairies, in not sufficiently, or frequently, shifting the cream, churning often enough, or properly scalding the vessels; and in making the dairies receptacles for meat, and various other family provisions; and it is frequently found, that the dairies and cellars are indiscriminately used for the same purposes, or placed too near each other, which must always tend to taint the milk and cream. In the construction of farm-houses, there is a general want of attention to the making of dairies in the North sides of them, or in situations out of the way of the farm-yards, and every effluvia which can tend to render them unsweet.

The calves are, for the most part, weaned, and reared. The veal is generally of a very bad quality, not only on account of the coarseness of the animal, but also, from a total inattention to the pursuing of the best methods of confining, suckling, and lodging the animal in the most cleanly manner.

*Sheep.* I now enter upon a subject which has been very generally discussed in this county, and which has produced

much contention and emulation, between the disciples of Mr. Bakewell, and those gentlemen who have adhered to that sort of sheep, which have been mostly, of late years, bred in the county; and the warring parties have now classed them severally under Leicestershire and Lincolnshire sorts.

From the best information I can obtain upon the subject, Mr. Bakewell's first essay in breeding sheep to perfection was made from particular sorts, selected from this county; but, probably, afterwards mixed with other sorts, in which he attended strictly to the nicety of shape, proportion and symmetry of the animal, procuring the greatest weight with the least bone and offal, foregoing for the consideration of the wool, or only regarding it as a secondary object, whilst the Lincolnshire breeders strictly attended to the production of large quantities of wool, and either disregarded the shape of the animal, or considered it only as a secondary object. The different exertions of the Lincolnshire and Leicestershire sorters before described, in a very few years produced a very evident difference, in not only the shapes and appearances, but in the uses of the stock.

During the American war, whilst our manufactures languished, in which long wool is used, and the Lincolnshire wool was totally unsaleable, Mr. Bakewell's ingenuity was exerted, in an attempt to persuade the Lincolnshire sorters of sheep, that he had a remedy to cure this evil position he started, to bring his points to bear, was as follows, viz. "It is impossible for sheep to produce much meat and wool in an equal ratio: by a strict attention to one, you must, in a great degree, let go the other; therefore, I have selected a sort of sheep, with a great propensity to feed, or become fat, and which necessarily must produce less wool, than your old breed, but it will be of a great quality," &c.

M. 1111

Many followed the pursuit, thus ingeniously recommended ; but as soon as ever woollen manufactures were enlivened by the blessings of peace, and there was a demand for the long heavy wool, Mr. Bakewell produced sheep, not only excellent in shape, but by no means deficient in the most profitable weight and fineness of the article.

*The Leicester and Lincoln breeds compared.* The Leicester-shire are produced with a perfect symmetry of body, light in the neck and head, full in the eye, wide and prominent in the bosom, wide in the shoulders, very long, strait, and broad, in the chine, round in the rib, and full in the twist, with very light bone ; the wool extremely fine and abundant. This animal possesses a wonderful propensity to become fat at an early age : that complete symmetry of shape, and consequent harmony of system before described, must ever have this tendency. We can trace it in other animals, as well as in this, with great precision : for instance, the horse, we commonly call a mould, will retain his flesh, and look sleek and well, under constant labour and fatigue, with the same quality and quantity of aliment, with which a long-legged, flat-sided, beast, working against him would be destroyed.

Swine, of a well-moulded sort, and with a small bone, will keep themselves fat in the common run of a farm-yard, whilst the long-legged, flat-sided, sort, kept in the same way, would be starved. It is a circumstance peculiar to animals of this description, that under the great propensity to become fat, it is laid on equally upon every part of the animal, whilst the long-legged, flat-sided sorts, first acquire fat in a large quantity in the insides, before any is laid upon the carcase ; of course, they are much longer than the other sort in becoming marketable, and on this account, the latter, when fat, are preferred by the butchers.

the common run of the Leicestershire breed of sheep produces about four fleeces to the tod, or twenty-eight pound; and the wethers are generally fat, and sent to market soon as they are shorn twice, commonly called two-shear sheep; and upon an average they sell, at Smithfield, 1s. *per* head. The Leicestershire sheep, considered as a breed for home consumption, cannot be excelled; but for the London market, might be improved by being raised a little on the leg.

The Lincolnshire breed of sheep, generally speaking, is of a coarser sort than the Leicestershire, larger in the body, and thicker in the neck; narrow in their shoulders, ribs, and chins; higher on the leg, not so straight in the backs, with considerably more bone; higher on the rump, upon which is laid a considerable load of fat, and a cushion; and these sheep, when made very fat, are very desirable at the London market, as their hind quarters are cut out in imitation of venison; and, about Christmas, in London, I have been informed, very fat haunches, are sold much higher than the common price of mutton, and often at near the price of real venison. The average quantity of wool is about three fleeces to the tod, or twenty-eight pound; the wethers, which are generally kept to be three-shear, before they are sent to market, sell for from 3s to 4s each. The superior advantage of sending two-shear sheep to market, instead of keeping them to be three-shear, making no more of them is evident; the additional weight of wool, and the third year's fleece, cannot be really advantageous, with the production, from the root, of one third more animals of equal value, on the same quantity of land, in a given time \*.

Probably a larger number than 1-3d more sheep may be kept upon the same quantity of aliment, under a consideration of their small portion of food which is required to maintain them at an early age.



Whilst I state the foregoing, to be the general breed of the county, I must observe, that there are breeders of sheep in it, who call them the Lincolnshire sort, notwithstanding as much care and attention has been paid to the selecting the most desirable kinds, as have been exerted by Mr. Bakewell, or any of his disciples. And, in the possession of Charles Chaplin, Esq. of Tathwell, are sheep, which do infinite credit to his judicious choice, and persevering attention in the improvement of the breed. The sheep of the common-fields, I do not bring into this account, from the circumstances of hardship, attending the scantiness of their food, the wetness of their layer, the neglect of a proper choice in their breed, their being over-heated, in being (where folded) dogged to their confinement, where they are often too much crowded; the scab, the rot, and every circumstance attend them, which can delay their being profitable; so that it may be reasonably concluded, that they are of less value than those bred in inclosures, from 10 to 15*s.* *per* head, and their fleeces are equally unproductive.

Mr. Walsby, and many other improvers of the breed of Lincolnshire sheep, deserve well of the country. Mr. John Codd of Ranby, Mr. Hoyte of Asbornby, and many others, are breeders from the Dishley blood, and, therefore, their sheep have been before described, under the appellation of the Leicestershire breed.

*Horses.* In the fens, the black-cart kind is chiefly bred, colt foals are sold off the mares, and sent into the high parts of Huntingdonshire, Cambridgeshire, Bucks, Bedfordshire, &c. from 10 to £12 each; and colts, rising two years old, from 18 to £20 each. In the neighbourhood of Long Sutton, there is a breed of horses for the saddle, remarkable for their bone, and activity; sixteen miles an hour is the rate of their trotting, and sixteen stone the accustomed

med weight they carry, in performing such exertions. Of this breed is Mr. Jenkinson's horse, of Park, called *Pretender*; Mr. King's, of Whitechapel, called *and Cry*. Mr. Wroot's, of Long Sutton, got Mr. Jenkinson's horse, and also a horse of Mr. Allenby's, of near Horncastle, called *Atlas*. The two latter horses were sent, in 1792, from Huntingdon to Cambridge, being sent in rails, in an hour, each carrying sixteen stone, for considerable wager. I have rode Mr. Wroot's horse, and he possesses uncommon activity in his trotting, and yet trots in a superior manner: other parts of the county are not deserving particular attention, as to the production of this animal. It is a practice, with many occupiers of the land, to purchase bay three-year old colts, at the shire fairs, to keep them a year, or till they are four years old, although, from the custom of drawing the teeth, by which means the last teeth come up a year before they otherwise would appear, and to a common observer, they appear to be five years old. They are then fat, nicked, and sold, at Horncastle fair, to the London dealers, at the customary prices, from 35 to £40.

They are then taken to London, where they undergo the exercise of the break, or carriage, for a month or two weeks, and are sold from seventy to eighty guineas for gentlemens' carriages.

Horses, thus young, being driven hard about the pavement in London, and kept in hot stables, soon give way in their feet, and they become foundered and useless; consequently a much larger quantity of these animals are bred in our land, than would otherwise be necessary, if they were seasoned, and used for the purposes of agriculture, till they are six or seven years old; and this circumstance must tend to delay the production of beef, mutton, and wool, as it goes. Besides which disadvantage, the horse is an impoverisher of the land he depastures upon, in the

same ratio that sheep are the contrary. All horses ought to be kept in confined situations, and fed upon tares, lucern, &c. &c. in summer.

*Swine.* These animals are generally of a coarse, bony, long-legged, flat-sided sort, and much inferior, in point of make and shape, to the Berkshire, Wiltshire, and Hampshire kinds, not possessing the aptitude to become fat, which ought to be attended to, in the production of this, and every other animal for the use of man.

# M E A N S OF I M P R O V E M E N T.

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## I. IMPROVEMENTS IN THE FENS.

*PROVED drainage.* In the southern part of this county, called South Holland, a main cut, or drain, is making, by authority of Parliament, from a place called Peter's Point, to Wheatmeer drain, near the hamlet of Peakhill. This cut will most certainly facilitate the drainage of this district. And another cut, intended to be made (in a similar way to that of the Eau-Brink cut in the Ouse, in another district,) to confine the course of the Welland to a narrower channel, from a certain point near Spalding, to a more certain and deep outfall than the present, at Wyberton road, will most certainly tend to promote the drainage of Deeping fen, and other low lands in the country. This appears to be part of a scheme suggested by Lord Chief Justice Popham, in the beginning of the last century, and afterwards touched upon by Sir Cornelius Ruden, Colonel Dodson, and several other engineers of the last and present century; and, it proves, that our efforts have suffered these excellent plans to lie dormant and unexecuted, as no new idea seems to have been now started in these subjects, or any thing offered which had not been previously suggested or recommended by antient engineers:

gineers : but, notwithstanding the certain prospect of general good, which presents itself upon the adopting of the last-mentioned plan, it meets with opposition, from local circumstances connected with trade and commerce, which, it is hoped, will be accommodated between the parties before a bill is brought into parliament; otherwise, it cannot be supposed, that the good sense of the legislature will suffer objects, evidently short-sighted, and of a very inferior nature, to weigh against the general improvement of a very large tract of country, which, when improved by the means proposed, will, by the increase of every commodity produced from the land, throw into the pockets of even the opposers of the measure, a very considerable balance of gain, if even the existence of the ground of complaint should be admitted; yet, I must freely observe, that none of these plans seems to me to be sufficiently general and comprehensive. Before new outfalls are made, taxes imposed, and terms settled for watering intermediate estates, &c. &c. the whole country dependent upon,\* or likely to be affected by, any intended measure, should be invited to partake of the proposed advantage. And it should be pointed out to the parties, how their interests are likely to be affected; and a calculation and estimate should be made of the quantity of water likely to be brought down to the outfalls, upon a *general* scheme of improvement, or, who can answer for their being sufficiently capacious? the imposition of taxes, by the acre, for any purposes of drainage whatever are oppressive to individuals (when their amount becomes an object that will amply pay the expence of making distinctions by estimates, &c.), and will remain so as long as the qualities of land shall vary. I recommend all drainage-taxes to be laid according to the value of the respective improvements. This country, though low, and subject to be overflowed in winter, very frequently suffers from drought in summer; as water is ob-

with difficulty, in dry seasons, for the cattle de-  
 ed on the land ; and the retaining of the summer  
 s, or freshes, in the main drains, in order to scour  
 and cleanse the outfall at sea, is absolutely necessary, or  
 old be in danger of being choaked up. This can only  
 remedied by *confining the rivers to narrower channels*,  
 ning and straightening their direction to competent out-  
 and, in many instances, it would be a very dangerous  
 ce to suffer the river-waters to be let out, and exhausted  
 e purposes of the occupiers. I should recommend to  
 nded interest, to examine carefully for springs of wa-  
 on their property, which would be a means of reme-  
 the inconveniences each way, hercin before pointed  
 and which, I am inclined to think, may be easily  
 ut to bear, at no very considerable expence, in wells  
 umps. In the North marshes I have lately promoted  
 arching for, and obtaining, the uses of inexhaustible  
 s of good fresh water ; and, I lately saw, upon the  
 nk at Theddlethorp, a spring of excellent fresh wa-  
 An improved drainage of the Northern, Eastern, and  
 ern districts of the fens, may be accomplished in the  
 salutary way, whenever the inclosure of the East and  
 fenn commons, and Wildmore fenn, are accom-  
 d by a general well-digested plan.

herever engines are necessary to facilitate a drainage, I  
 mend the steam-engine, to accompany the wind-  
 es, in a considerable work ; because, it too frequently  
 ns, that a calm succeeds an abundant fall of rain, for  
 siderable length of time. The steam-engine may be  
 diately set to work, at a time the most desirable, and  
 the expence of firing cannot be set in comparison  
 ts advantages ; and whilst the wind-engines remain  
 , and those which will throw up one hundred hogf-  
 of water per minute, many feet, may be put up at  
 any

any place near a navigation, for about 6 or £700. Messrs. Bolton and Watt, of Birmingham, are very likely to be enabled to supply them.

*Improved Agriculture.* It is asserted, by persons very conversant with the open fens, and open marshes, that sheep will thrive faster in exposed situations, than where they are shaded from the sun in summer, and sheltered from the wind and weather in winter. This idea is drawn from an observation, which, in my mind, ought not to be conclusive upon the subject, which is, that when these animals, by any means are sheltered in bad weather, they lie quiet, and have no inclination to stir into the open parts to procure sustenance, and that they evidently, from this circumstance, decline in condition, whilst those in open situations, totally without shelter, never fail to seek for food, even in the snow, and keep themselves in much better condition than those which are sheltered. That, under the shade in summer, sheep will lie to be fly-blown rather than stir into the sun's influence to take their food. For my own part, I should rather be inclined to follow Nature, in the present instances, than to oppose her; and, I am of opinion, that the instinctive faculty points out that which is best for the animal. And pretty good shelter in bad, or snowy and frosty weather, with some good turnips, or cabbages, drawn upon a clean situation, with some good dry rack-meat, will most promote the health, and well-doing of the animal, and the interest of its master. At certain seasons of the year, the flies are equally active; and I am not inclined to believe, and my observations have not led me to admit, that flies will blow sheep, in a shaded situation, in a greater degree than in those more exposed; and it is entirely the fault of the grazier, if he manages his hedges in such a way, that his sheep can lose their  
wool

by running into them. I recommend the making of white-thorn quick fences, where practicable, not only for the count of shade and shelter, but as a means of keeping the stock apart, in dry seasons, and as a means of preventing the young stock from being drowned in wet ones.

Do not suffer neat cattle and horses to poach up the land in winter, but otherwise to confine them in warm or crew yards, where they should be foddered according to the purposes for which they are designed. To bring the manure to a convenient place, and there stack all hay or straw, not only to prevent the land being poached in the winter, whilst it might there be expended, but in order to have the manure, in a compact body, which is not only better fermented, and stronger on that account, but may be carried to such parts, and distributed, where the lands most in need of it; instead of its being wasted, and lost to the occupier.

The practice of paring and burning should at any time be absolutely necessary, in order to get rid of a variety of the productions, which cannot be subdued by any other means, I should recommend its ever afterwards being discontinued, as a practice highly prejudicial to a farmer's best \*. For that soil, which is already too light, requires not ashes to be mixed with it, the surest means of making it lighter; that soil, which is already too low, requires not to be subtilized with fire, the surest means of increasing its quantity, and of course the making it lower. This practice has Idleness for its parent, and Poverty for its offspring."

I rather recommend the management of the fern land, in similar ways to those which are practised by the best cultivators of light upland soil.

\* My publication, in 1785.



1st. To fallow and manure for coleseed, cabbages, or turnips, and to cultivate that sort of green vegetable which will best suit the soil.

2d. To sow barley, if the land is not adapted for barley, then to sow oats, and, with such spring crop, to sow such mixtures of ray-grass, trefoil, or clover, as will be best adapted to the soil, to remain laid down therewith two years; but, if the land is very light, to lie three or more years.

3d. The turf so made, to be broke up in February, or as soon afterwards as possible; and to cultivate beans, pease, tares, or other pulse, thereon to be drilled or dibbled.

4th. To cultivate wheat in the same manner, or to sow wheat upon a clover lay, if the land is very light, then to make a mixture of wheat and rye, afterwards a fallow for a green vegetable crop.

One of the principal arguments commonly used to support the practice of paring and burning, is, that by such means grubs and worms, with which this kind of land is generally infested, are thereby destroyed.

The case is not quite so bad, where burning is practised, as this argument would lead to. The whole of the soil not being burnt, and of course the whole of the grubs, &c. worms, deposited therein, cannot be destroyed; besides, the sods undergo a process in being dried before the burning commences, of course, during that time, the insects may retreat into their natural element, and shrink from the fire; and, I am of opinion, that if a heavy roller was to be used, by day, upon this kind of land, at different

ns, whenever it is laid down in grass, and at many times, and a lighter one by night; the insects which infest this kind of land, would very soon be more easily destroyed, than they could possibly be by pasturing and burning; for they certainly come forth, upon the surface, to seek their food by night, and if the soil is compacted by the roller by day, those which are too remote from the surface, to be thereby destroyed, make their removal from the surface with more difficulty by night, on account of its being made more compact, and are thereby easily destroyed.

Various arguments have been used, with a view to prove, that beans are not properly to be cultivated upon fen land; the most formidable one is, that they commonly run up raw, and bring but little corn; the fact is, that they are generally sowed too thick, and upon soil which brings every seed, that is sowed upon it, in due season; it is no wonder that the earth should throw forth a larger increase of production, than she has power to bring to perfection, and more especially, as, by such an abundant production, the air is in a great degree excluded, and thereby the means by which the generation of the plants should be increased, is lost. And, it sometimes happens, that when plants are disposed to the best advantage for want of a reasonable draft of air, or a proper stock of bees, this natural process is delayed, and the crop is thereby lost.

But beans, and such like productions, as well as all other corn seeds, be put into the ground a competent distance from each other, and we shall find nature, equally kind to all, will give your plant a stem sufficiently strong to bear its burthen, and an increase, duly proportioned to the height, and that height will be apportioned to the distance of the food for the plant, deposited in the soil by the drill, and the hoeing husbandry, are well adapted

for the fen soils ; and if they were not to be repeatedly cropped, and driven out of heart, green vegetable crops might be obtained in perfection, without the process of fallowing being much used ; a circumstance very desirable, because light soils are best managed, when not pulverized, and turned about ; for the more compact they are kept, the better ; and a heavy roller will be a better friend to the fen farmer, in the long run, than a thousand paring ploughs.

## IMPROVEMENT OF THE STRONG LOAMY AND CLAYEY SOILS.

, with regard to the inclosed land, I recommend the soil shall be applied to its right use: that is to say, parts of the pasture land, which are best adapted to the soil, shall be converted to such use, and such parts of the land, now arable, which might be better laid down for pasture, shall be so used.

There is not a circumstance in agriculture so little understood, as the *application of soil to its right use*. And, independent of local circumstances, such as the vicinage of towns, homesteads, or convenient spots near farms, all light soils, and all thin stapled clayey land, are fitted for perpetual pasture; as they are subject to be suddenly affected by dry weather, to crack, and to split to pieces hastily, and thereby the roots of the plants are destroyed, or very much checked, by being exposed to the sun and air, and the sun and air are applied to the soil to dry them up, to the great detriment of the crop.

Were we to fix a criterion of the land which is best fitted to be laid down for perpetual pasture (independent of local circumstances), it would be, that which has such a quantity of soil, that no cracks, or fissures, in the driest seasons, are produced in it. I am confident that a very considerable portion of land in this county, now in a state of

of pasture, might be changed to arable, to the great advantage of both the proprietors and occupiers.

In particular situations, where it might be desirable to keep the land in a state of perpetual pasture, ploughing it up, and cleaning it, by means of fallowing; and a well-chosen course of cropping, for five or six years, and then laying it down again with the best grasses, to be sowed with a first crop of grain, after a good fallow, and a green vegetable crop to be eaten off by sheep, would be a means of improvement, which is not calculated upon in this county.

It is not only an unsightly appearance, but a distressing circumstance to the renter of pasture land, of which, considerable portions (in many instances two thirds of the fields,) are occupied by large ant-hills, producing sour, coarse, husky, sedge, or sword-grass, of no value, as it possesses no wholesome quality; and no animal in the creation will depasture upon it. Let any persons, even those unacquainted with the improved agriculture of the kingdom, walk into fields of this description; they will immediately observe, that the land between such ant-hills is wholesome and nutritious, and they must make an immediate comparison; the result of which is, that the sedge coarse ant-hills are quite the reverse, and, in proportion as such land is covered with a production wholly unprofitable, the interests of the proprietors and occupiers are delayed; for instance, if I occupy a given quantity of land, at seven shillings *per* acre, two thirds of which is covered with ant-hills, as before described; I may justly consider the only useful and profitable part of my land, as rented at a guinea *per* acre.

Different methods have been suggested, and means tried in the best-cultivated counties, for improving land, thus situated, without ploughing it up.

by means of paring off the sedge, and carting it to  
 of lime and dung, and spreading the soil and  
 upon the land after sowing grafs seeds, upon the  
 the ant-hills.

By paring and burning the sedgy hills, sowing  
 ds, and strewing the ashes upon the scarified

in paring off the superficial part of the hills, throw-  
 soil contained in them about the land, and laying  
 superficial parts down upon the bases of the hills; a  
 commonly called gelding them.

atter practice I have seen answer tolerably well,  
 the surface of the hills has produced a middling  
 bage, and where it was an object with the occu-  
 continue the land in pasture, on account of some  
 nsiderations; but this process, when judiciously  
 ed, was three years in being brought about upon a  
 ot; for apprehending that the best of the land  
 e ever-burthensd with dead earth, only each third  
 in a field was annually gelt, or thrown down. In  
 where the hills cover a considerable part of the  
 d their produce is bad, I recommend the plough-  
 e, and converting it to tillage for one course of  
 ry at least, that is to say, for five or six years.

els myself to have no prejudice for pasture-land.  
 I am always inclined to apply the soil to the most  
 te profitable uses it is capable of, consistently with  
 ervation and improvement of the inheritance in it;  
 proportion as the value of the land is diminished,  
 management, the rent is nominal, and a proprie-  
 ceiving, as such, a part of his inheritance. All  
 object to be overflowed by rivers, and in the vici-  
 nity

nity of large towns; and in any other situations, where it has an additional value stamped upon it, for the conveniences it affords, ought to be continued in pasture (except small portions used as garden-ground); but in more remote situations, it behoves every proprietor to apply his estate to the most profitable uses. I am confident these opinions will meet with opposition from men, who are unacquainted with the most approved practical husbandry \*, and who, as agents or surveyors know not how to apply the soils to their right use, nor how to lay down the regulating systems of agriculture, adapted to each soil, in order to preserve and improve the estates; for it is impossible, that mere measurers of land, or persons never having resided seven days in their whole lives in a well-cultivated country, and who have been constantly plodding in a district, where its agriculture is more than a century behind many other counties, should be competent to a business of this nature; as reasonably might we expect an hedge carpenter, successfully to amend a Cremona fiddle.

It is perfectly clear to me, that such land as is good pasture, would be equally good arable, if it was to be applied to such purpose, and, in many instances, more profitable to the occupier in that state †. There cannot be a greater

\* Amongst other arguments which will be used against the measure of converting pasture land to be arable, it will be said, that by such means the quantity of cattle, sheep, and wool, will be diminished; but will not the artificial grass seeds produce cattle and sheep; and, upon a general plan of applying the soil of the kingdom to its right use, will not much land now arable be made pasture? and will not the value of corn, and cattle, produced on our land, average themselves in value in every four years? If we find a want of sheep, or cattle, will not their value be increased; on which account, will not the farmer lay his arable land down with seeds, and produce cattle and sheep, until the balance will preponderate the other way in favour of producing corn? and then the land would be again broken up.

† It has occurred to my observation in practice, that a farmer's team of horses have been depastured a whole summer upon twenty acres of pasture-land, of the yearly value of 20s. per acre, whilst three acres of the same land in lucern, and two acres of tares, properly mowed in rotine, would have better maintained them.

city in practice, than that of regulating farms to contain certain portions of pasture and arable; without first considering for what particular purposes the soil is best suited. *There is very little arable land in the kingdom, or now pasture, proper to be converted into arable; which, in that state, will not come on in rotine to be laid down in the third or fourth part, with artificial grasses; and, when so sown, in proper condition, will not produce nearly as much for animals, as the whole would furnish, if continued in the very state of perpetual pasture.*

I should recommend that every farm consist of a portion of arable land, being at least one third, if not one half, of the whole quantity, even where the land is found in a fair situation as pasture; because, unless an occupier has a certain quantity under the plough, to enable him to rotate every year a regular apportionment of green winter food (such as turnips, cole, or cabbages,) and artificial grasses and corn, the greatest advantage both in the way of fertilizing the whole farm, and applying it to its use, is lost to the occupier. For, under well-regulated systems of farming, with a meliorating crop of peas, beans, and other pulse, interwoven between white-grain crops (under the drill and hoeing husbandry), arable land is kept supported in good condition for ages, with only a small proportion of the manure arising from the fold-yard, and the residuc of the manure may be applied *to the improvement of the pasture land*, which may in a great measure be advantageously spared from the scythe, on account of the mowing of the clover, or other artificial grasses for hay. Circumstances of great advantage, when compared with the impoverishing mode of mowing annually a considerable quantity of the pasture land for hay, where the stock is restrained, and where, for want of straw, no lodging for cattle, by means of well-littered crew, fold-yards, and no valuable manure, can be had; of



course the cattle, in such situations, poach up the land in being foddered in open places, and drop their manure, where it cannot be of any possible benefit, besides the advantages before alluded to (in applying a part of each farm to purposes of cultivation) sheep may be bred, to supply the grazing, or feeding part of a farm; advantages, when united, highly beneficial to the occupier. But, in regulating this system, I am aware, that there is danger in setting about it, where the persons who have the superintendence of landed property, are not well skilled in the best modes of agriculture to be adopted, or who do not possess industry and attention in seeing them carried into effect, and so maintained; and, I am confident, that for want of attention to such qualifications, or the due application of them, (and an idleness encouraged by the natural fertility of the soil;) the agriculture of this county has remained in the present unimproved state.

The drainage of this description of property is generally neglected; the ditches ought to be made in a competent manner, to prevent the soak of one field injuring the produce of another, and to carry off the water which falls upon it, and also by means of hollow drains, the springs that rise thereon. I recommend the main drains to be made, in most instances, not less than five feet wide, and four feet deep, with a general connection to an outfall, funnels being turned over gate-ways of equal depth with the ditches. The lands which are ridged up to a great height to be ploughed, lowered, and made of less width, by any means, the most effectual to prevent the burying the natural soil, and the bringing a dead earth upon the surface in its stead.

The live fences to be repaired by means of well-trenching the vacant places, planting them with white-thorn quick, to be well hoed, and guarded by good fences, from being injured by cattle and sheep, and where the white-

quick is not supposed to be likely to grow, to sub-  
e crab for it.

o prevent the trimming up, pruning, or lopping the  
er and timber-like trees, which are generally much  
ed by this practice; for it is necessary that the dic-  
of nature should be more attended to: every plant and  
quires a due proportion of foliage, to promote its  
n and improvement.

ot to plant any trees in hedge-rows, because they dleep  
the quicks, and prevent their growth, shade the  
and when cut down, make very unsightly and in-  
venient gaps in live fences. If wood is necessary for  
upport of an estate, a portion of land should be set  
for its production.

o divide the ground by live fences into the most con-  
nt sizes; that is to say, at least into as many separate  
ls, as, according to the size of farms, and the courses  
opping best adapted to the soils, will keep each pro-  
on separate. In large farms it would be proper to  
double that number of parcels, for instance, in a  
e of cropping, of six parts, to have twelve fields, &c.

o promote the building of farm-houses, barns, &c. in  
most central situations.

o perform all the business of a farm with oxen, where  
poaching will not be more prejudicial, than the tread-  
of horses: except, in such cases, where a good deal of  
lling on hard roads is necessary, in which case, four  
re horses must be kept.

ot to wear out any animals in the cultivation of a  
, but to sell off horses before they are much past their  
e, for other purposes than those of agriculture, where  
seasoned horses are required, and to feed or fat cows,  
e, and ewes, before they decline in value.

o procure the most useful and profitable breeds of each  
cular kind of stock.

To use an heavy roller, at seasonable times, upon all pasture, and land sowed with grafs seeds, at Spring and Autumn.

To provide comfortable habitations for the necessary labourers on each farm, with a convenient garden, and depasturage in summer, and winter food for a cow to each cottage, at a moderate rent; this will be a means of attaching them to a farmer's interest, in proportion as they regard their own, and of promoting population, in proportion as the means of producing it, are improved.

By no means to increase the number and size of farms upon these soils, which will be found most profitably cultivated in many hands.

*Inclosures.* In allotting the lands upon the inclosures, it is proper to consider the occupiers as to the size of the respective allotments, as so many proprietors, allowing them their several occupations, changed into a new and improved shape, to make the allotments as nearly as possible in squares, considering the central situation of farm-houses, and necessary buildings, as the first and best object of inclosing.

The application of the respective soils to their right uses, together with the improvements recommended upon the inclosed land, I hope to see adopted, or any other plan which can ensure more public and private advantage.

No circumstance tends more to bring the measure of inclosing into disrepute, and to render the advantages which should result from it doubtful, for a considerable time after it takes place, than (in situations where the tenants are not under any regulations with respect to the management of the land, or under any restrictions to prevent abuses) the agitation of the subject for two, three, or more years, before an inclosure takes place; during which time, such occupiers withhold a very considerable part of the manure,  
which

in regular order ought to be laid upon the land, repeatedly crop, and work it out of course, and out of

Where this practice is general in a parish, it has effect upon the quantity of land to be returned to the five proprietors when it is allotted : but where it is only pursued, it very considerably affects the interest of the proprietor. And in every instance where such mismanagement is pursued, it tends immediately to increase the labour of the occupier of the new allotments, and to delay his improvement for a considerable length of time, after an inclosure takes place.

It is absolutely necessary, in the foregoing case, that regulations should take place to enforce good husbandry, and to prevent delay, where an inclosure is intended.

### 3. IMPROVE.

### 3. IMPROVEMENT OF THE WOULDs,

OR,

### LIGHT LOAMY AND SANDY SOILS.

**I** RECOMMEND the inclosing common-fields and waste-lands, and reducing the size of large farms, already inclosed, by dividing them, and building necessary farm-houses in central situations; not suffering any farm to exceed 800 acres. And in proportion as the soil is found to be good, to decrease the quantity of it in the hands of the respective occupiers, for the following reasons, viz.

1st. That occupiers of small quantities of poor soils do not generally possess the means or ability to get into any great schemes of improvement, which are attended with very considerable expence on the outset; where either clay or marl are efficiently applied; on which account it is necessary, that considerable quantities of land should fall into the fewer hands.

2d. That, where the soil is naturally fertile, and does not stand in need of foreign aid, there is not a necessity for the occupier immediately to lay out any considerable sum, with a view towards future benefits to be derived from it; and the occupancy of a small portion of such land, in the management of which there is generally a larger portion of profit; for a smaller portion of labour, than must be applied to poorer soils, when out of condition, will afford a small farmer the comfortable means of supporting a family with credit. And, I will venture to hazard an opinion, that farms, properly laid out, according to the nature of the  
respective

ve soils of the yearly value of from 40 to £200, are  
 ft desirable for the proprietors, and to the commu-  
 where such regulations are adopted.

e necessary buildings are judiciously constructed and  
 y adapted to situations and circumstances, the oc-  
 can afford to allow the proprietors such additional  
 as will amply repay them, even if the progressive  
 ement of their property was not thereby facili-  
 The mere circumstance in reducing the expence of  
 in having farm-houses, &c. placed in the centers  
 occupations, would enable an occupier to pay a full  
 for the expences of erecting them.

ns thus laid out, would tend to excite general emu-  
 and exertion amongst the occupiers. The small-  
 er would see before him the certain means prepared  
 rising into a larger occupation as his exertions  
 crowned with success. A large production of the  
 articles raised upon the land, such as pigs, poultry,  
 t, &c. &c. will be insured to the great advantage of  
 munity; regard to such trifles being generally con-  
 unworthy the attention of the monopolizing farmer.  
 extremely desirable, where consistent with central  
 ns, that farm-houses should be placed upon the  
 parts of farms, because the most laborious part of  
 gular process upon a farm is drawing out the ma-  
 from the fold-yards, which is easiest performed upon  
 which slopes from them.

n-houses placed in vales, and low situations, have  
 ly their manure much wasted by water running  
 h them, and carrying with it the essence of the ma-

his idea I am happy to observe, I have the coincidence of Mr. Kent,  
 man well known for his skilful practice.

es are wonderfully advantageous, not only as the honey is valuable, but  
 promote the generation of plants.

I recom-

I recommend that all farm-yards be made in the form of a shallow-dish, the depth of which should be proportioned to the circumference of them, with one or more tunnels laid into each, in order to carry off the superfluous water, when they shall be over-charged; which occasional overflowing should be confined to a reservoir adjoining, whence the water, impregnated with manure, may be returned, or thrown upon the dung, &c. when it shall be laid in a heap, or otherwise become too dry for fermentation.

To grant leases of farms for terms of years, proportioned to the nature of the improvements, which will insure the cultivator not only a repayment, but a competent reward for his skill, labour, and first expence.

With proper attention to the best mode of making ponds, and reservoirs of water, preventing absorption, and also exhalation, by properly planting around them; almost every situation will afford the means of collecting, and reserving a sufficient quantity of water in winter, for a summer's consumption: and if I may be allowed the very probable means of raising water from wells, in almost every situation, there will be but little doubt of success in this particular.

To build or provide a cottage, with a suitable spot of garden-land, and the means of maintaining a cow both in summer and winter, for each necessary labourer, employed upon an estate, and probably it will be found advisable to place such cottages near, or adjacent to, each other; which will be a saving in point of expence, and the means of making the conduct of each individual known to his neighbours; from which circumstance a degree of caution, and even forbearance may be produced. To divide the enclosures into such sizes which will be best suited to the routine of husbandry, and extent of each occupation. To

the courses of husbandry, adapted to the nature of the soil to be brought into cultivation, like the following :

1. Upon that of the strongest nature, or First Class.

1st. year, fallow and turnips ; 2d. barley, sowed with  
grafs, trefoil, and clover ; 3d. grafs seeds ; 4th. grafs  
seeds ; 5th. broken up in February, and peas dibbled or  
drilled in ; 6th. wheat, afterwards to be fallowed.

### SECOND CLASS.

1st. year, fallow and turnips ; 2d. barley, sowed with  
grafs, trefoil, and a small portion of red clover ; 3d.  
grafs seeds ; 4th. grafs seeds ; 5th. grafs seeds ; 6th. peas  
drilled in ; 7th. wheat, and, if its bearing of wheat is doubt-  
ful, to mix one third rye, then fallow again.

### THIRD CLASS.

1st. year, fallow and turnips, (eaten off) ; 2d. barley  
sowed with rye-grafs, &c. ; 3d. grafs seeds ; 4th. grafs  
seeds ; 5th. grafs seeds ; 6th. grafs seeds ; 7th. peas or tares,  
drilled or drilled ; 8th. wheat and rye mixed, two thirds  
wheat, and one third rye, the latter.

### FOURTH CLASS.

1st. year, fallow and turnips, (eaten off) ; 2d. barley,  
grafs, &c. ; 3d. grafs seeds ; 4th. grafs seeds ; 5th. grafs  
seeds ; 6th. grafs seeds ; 7th. tares, dibbled or drilled in  
February, afterwards fallow for turnips.

Courses of cropping, thus adapted to the respective soils,  
keep each in the highest state of condition it is capa-  
ble of. Very light soils will not bear a quick repetition of  
the same sorts of grain, and are profitably productive no

M

longe



longer than whilst the good effects of the turf remain in them, thus promoted by sowing rye-grass, and artificial grasses \*.

With regard to the raising of live fences upon the different classes of these soils, I recommend as follows :

Viz. for the 1st. class, white-thorn quick ; 2d. class, ditto ; 3d. class, crab, with two rows of gorse, sowed in drills on the North and East sides of a bank, about eighteen inches apart from the quick, and twelve inches from each other ; 4th. class, 1st. row crab, 2d. row birch, twelve inches from ditto, and two rows of gorse.

I particularly recommend, that quick be not transplanted from a richer soil, where it is raised, to a poorer ; but, as equally as possible, to soils of the same nature and quality. Whenever this error is committed, the plants cease to improve for a considerable length of time, and until new roots and fibres are formed, enlarged, or contracted in a competent manner, to receive or imbibe that kind of food, nourishment, or support, which the respective soil, where it is planted, shall afford, until this process is performed, the plants become dried, bark bound, and stunted ; from which condition they never recover, until they are cut up at the root, which often delays the growth of the fences for three or more years. And this is the case with every kind of tree or plant in a greater or less degree, from which condition such plants as are intended for timber never recover, as they cannot be restored by the same means, when treated contrary to the rules I have laid down.

• Light sandy, and very light loamy soils are rendered more light by being too frequently ploughed and harrowed. By sowing a portion of clover and trefoil with the ray-grass, the latter acquires additional vigor, upon the decay of the former ; the clover is over-powered by the ray-grass in the second year ; and the trefoil in the third and fourth years ; poor soils are, when under the best management, longer in acquiring this necessary turf, than those of a richer nature. The methods here recommended are agreeable to the most successful practice in the Eastern part of Norfolk, where I was bred up a farmer.

commend the cultivation of a few acres with carrots, turnips, and potatoes, upon every farm, annually, as a means of feeding cattle and swine to great advantage. Pigs are more valuable to a farmer than any other animals for the following reasons: 1st. They yield a greater quantity of meat in a shorter time than any other animal; 2d. They are less subject to the losses and casualties which other animals are subject to; 3d. Their manure is more valuable than any other animal.

It is not meant to be understood, that a farm ought to be wholly stocked with swine, but that a considerable number ought to be kept by every farmer; that is to say, upon a farm of £200 *per annum*, consisting of two thirds under tillage, 100 head of swine might be annually produced at the average value of 40s. kept or folded upon clover by day, and brought into a fold-yard by

#### 4. IMPROVEMENT OF THE NORTH

AND

#### LOW MARSHES.

I RECOMMEND, that the drainage of this very valuable tract of country, be taken, by act of parliament, out of the management of the commissioners of sewers, and divided into two, three, or more districts, as shall, upon investigation, be found necessary, for the better drainage, and management thereof. For the land-owners in each district, by ballot, or any other more eligible mode, to delegate their interests into the hands of three or more commissioners, well skilled in the art of embanking and draining, subject to their controul, and removable for misconduct.

To connect the embanking, and draining of each district together, as if it was the property of one well-regulated family; making each respective part of the property contribute its share of expence, in proportion to its share of advantages, to be derived from any improvements.

If a plan of this kind were to be adopted, we should not see the occupiers of a frontage town, letting their bank fall, from wilful neglect, in order, that when it shall be condemned, the whole level may contribute to the expence of a new one; in which expence their share would be less (as part of a large district) than otherwise in doing their duty by upholding their embankment, as occupiers of a frontage town. We should not see the water held up by narrow passages, and crooked rivulets, overflowing

tracts of high land, from the fear of letting it down  
works below, incompetent to carry it to the sea.  
could not see some towns well drained, whilst others  
ing to them, equally capable, are overflowed. All these  
may be speedily cured, and an immense general sa-  
ad, by adopting a plan, similar to this which I re-  
end; for, by connecting the embankment, and  
ing of a whole country together, the works will be  
ntly attended to, and well secured; the water will  
lected together, and carried off in larger bodies to  
in the most advantageous places, by which means  
have competent power to scour out the outfalls.

number of goats may be considerably decreased, and  
portions of fresh water may be spared (if necessary)  
e cattle in summer, than at present, whilst almost  
frontage town has a goat, to which, (in order to pre-  
ny kind of effect,) all the water that can possibly be  
ed must be sent. I farther recommend, that the ant-  
re leveled upon the pasture land, and upon the ara-  
similar mode of cultivation adopted, as I have advised,  
strong loamy and clayey soils.

h regard to the roads, I recommend that all carriages  
nined as much as possible to pass in dry weather,  
at all attempts to amend them are confined to that

Good materials for making roads, are obtained  
reat difficulty and expence in this district. In pro-  
as such materials are weak, the more of them are  
y, and, when applied, they might be more confined  
th, than is the general practice, to be made up in

Within a reasonable distance of the sea-shore, ma-  
may be had and fetched for the making of the roads  
used as I have pointed out; and, upon properly  
ng, it is highly probable materials may be found in  
convenient situations. If my plan should ever be  
d, for improving the drainage and embankment of  
the

the marshes, a clause may be introduced into an act of parliament, for the purpose of improving the roads.

And upon this coast, between the port of Boston, and the Humber, it may be considered advisable, upon a proper investigation of the subject, to make a port, for the promoting of trade and commerce.

And, probably, if a victualing-office were to be established at Boston, for curing beef and pork for his Majesty's service, it may be considered very expedient; because near ten *per cent.* is lost in the expence of driving cattle, &c. from the adjacent country to the London market; and the cattle thereby heated, and rendered less desirable for the purposes required; from which circumstance, if the measure I have pointed out were to be adopted, the business of slaughtering, and salting, might here be carried on a month later in the season than at Deptford.

## 5. IMPROVEMENT IN TIMBER

AND

## UNDERWOOD.

The first thing which claims our attention is, a due investigation, whether land, which is now used for the production of timber, is most profitably applied to such purpose under a due consideration of the nature of the soil, its local situation and circumstances? The second, whether such timber is adapted to the soil upon which it is produced? I am of opinion, that all land of an high quality, viz. from 18*s.* to 25*s.* *per acre*, might be the most profitably applied to the purposes of cultivation; the advantages to be derived from an annual rent, produced from grasses, &c. with its accumulating compound interest, in a term of years, be necessary for bringing a crop of timber to perfection, and produce a much larger sum than can be reckoned upon it.

Various calculations have been made, upon the probable advantages to be derived from the cultivation of oak timber; but such calculations are wholly founded on conjecture, as the probable term of human existence falls so far short of that length of time which is necessary to bring the plant to perfection, upon soil the best adapted for its production, that regular periodical, and competent observations, in particular instances, are lost or hidden from enquiries.

It is difficult to set apart any spot of land, as best suited for the production of oak timber, which has not already produced

produced it, because so much depends upon the substrata of soil through which the tap-root ought to find an easy progress, in regular approaches towards perfection: any inequalities, by means of stony or hard bodies, which it may meet with in any stage of its growth, will certainly retard the vigour of the plant, and make it become stunted, of which the superstratum of soil gives no indication in the first instance to govern us. Space is necessary to be allowed each plant, by regularly thinning of woods and plantations, in order that the expansion of the branches of the trees may not be too much impeded; a due proportion of branch and foliage being as necessary for their health and support, as it is for the roots to be remain unimpeded. Particular instances have occurred, where a large quantity of timber has been produced in high perfection, where the trees have been very thick, with but little foliage; but it has been in those situations, where the soil is extremely deep, and rich, making amends for the exclusion of a very considerable part of the atmospheric nutriment, which, on soils less fertile, is absolutely necessary to be imbibed by the plants for their health and support. If the oak has space for its branches to expand themselves, fifteen trees, containing on an average from 80 to 100 feet of timber each, will cover an acre of ground. And unless, as in the case before stated, the trees have sufficient room for expansion of their branches, their growth will be impeded in proportion as they are cramped. Thin stapled clays of a low quality, such as are found in the west part of Huntingdonshire, and the high parts of Cambridgeshire, now let from 5 to 7*s.* *per* acre, are probably well adapted for the production of timber and underwood; and, upon the poorest cold soils of this county (though the quantity is small), timber and underwood should be continued where found, and improved on land where it is planted, and similar soils should be converted into wood-land.

is impossible that timber and underwood can be any  
 re raised upon a given spot in a mixed state, in as large  
 quantities, and to as much perfection, as they might be se-  
 tely; yet a very considerable head of timber may be  
 d, in succession, with a good crop of underwood; and I  
 der this to be the most profitable mode of employing  
 land, by which means the present generation, as well  
 osterity, may be benefited; and the land thus made  
 a more productive than it would be, by the separate  
 vation of either timber or underwood, because the su-  
 ratum may be fully employed in raising the most valu-  
 crop of underwood; being that, for which the soil is  
 ed; an advantage which may probably be found appli-  
 to the necessities of the country where it shall be pro-  
 d, and of a much higher net annual product for rent  
 would be made of the land, in any other mode of oc-  
 tion; whilst the substratum is productive of a succession  
 mber of considerable value. I cannot close this re-  
 , without observing, that the general mode, in which  
 men permit their woods to be managed, is not the best  
 can be devised. I recommend that forest officers,  
 rds, agents, and woodmen, shall have regular fixed  
 es, and that they shall not constantly have it in their  
 r to take advantage of their own wrong-doing; for,  
 ding to the present mode, pretty generally adopted in  
 falling and converting timber, it is customary for  
 to take part of the property in bark, topwood, &c. &c.  
 oundage, as perquisites of office, upon the sale of it;  
 herefore, whilst the quantity annually to be cut is li-  
 , it is their interest not to cut down such trees as are  
 re or decaying, but otherwise the most ~~rising~~ ones which  
 d, according to the best mode of employing the land,  
 most for standing longer, and which will consequently  
 ce most bark, and top or lop-wood: and when gentle-  
 of landed property shall, from experience, feel the ne-  
 N cessity,

*Swift*



cessity, for giving more attention than at present, to the improvement of the agriculture to be adopted upon their estates, men of skill and experience will be employed to superintend them, at such salaries as will not only make them respectable, but will place them above the temptation of abusing the trusts to be reposed in them. I take the liberty of recommending to the Board of Agriculture, and to gentlemen of landed property in general, the measure of promoting the education of young men for the offices of surveyors and land-stewards, in the best cultivated counties, by means of sending them to assist in the best practical husbandry of Norfolk, Essex, Suffolk, and Hertfordshire; and the breeding, feeding, and improvement of cattle and sheep, now so successfully practised in Leicestershire. And, that all persons who shall in future be disposed to practise as surveyors, should give their names to the Board of Agriculture, stating their pretensions, in order that they might undergo an examination, in a similar way as candidates for other professions; and, upon being appointed, to receive certificates for their qualifications. If a plan, similar to this, were to be adopted, such men as had expended their time and property in acquiring the fundamental instructions for a competent knowledge of agriculture, upon which subsequent experience have been grafted, would have a fair prospect of success, from their exertions; and the interest of the community, as well as that of individuals, would be essentially promoted.

## MISCELLANEOUS OBSERVATIONS.

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*INES arbitrary, Herriots, &c. &c.* I recommend upon enclosures and divisions of landed property, and in every case where practicable, the enfranchisement of copyhold estates, from arbitrary fines, herriots, &c. For whilst lord of a manor is entitled to two years improved value of them, upon the death of a copyhold tenant, or on the alienation of the property, particular cases every day occur, to prevent the tenants from expending their property in the improvement of them.

*Commerce and Manufactures.* The principal ports in this county are Boston, and Gainsborough; whence corn, wool, oak and other timber, hemp, flax, woad, and other articles the produce of the county, are occasionally exported to the London, and other markets. The imports are chiefly coals, fir timber, &c. &c.

The means of making such exports, and imports, may be said to be beneficial to agriculture, and have long given to this county the superiority, in point of situation, to many inland counties, of which the inhabitants, from an indolence or supineness, commonly inspired by an abundance of natural gifts, have not availed themselves; now, the introduction of inland navigation, will put the inland counties, in a series of years, at least, upon a footing with it; and will continue, until the vast beds of coals in them are exhausted, whilst our manufactures increase, or unimproved agriculture shall so far increase, that the produce of the soil shall exceed the possible consumption of its

inhabitants. This county has been remarkable for its manufacture of stuffs for ladies apparel, the spinning of which has been chiefly performed by their fair hands ; this manufacture was promoted with great spirit by Lady Banks, and several ladies and gentlemen of extensive landed property, and unbounded philanthropy, during the American war, when long wool had no market ; thus to induce the inhabitants, in some measure, to provide for themselves a remedy, for the then general decay of manufactures, and commerce, and since the necessity for the measure, in a great degree, has been removed, an annual ball has been continued in the county, in commemoration of so laudable an undertaking, which is well attended by the nobility and gentry, where the native charms of ladies (if possible) receive an additional lustre, from the simple elegance of their dresses, chiefly composed of Lincolnshire stuffs.

At Epworth, there is a manufacture of sackcloth, but it is not carried on very extensively ; in many other parts of the county there are manufactures of coarse linen cloth, also malt-houses, and breweries, and many other articles of common home consumption are made, but not of sufficient magnitude to deserve particular notice.

*Roads.* The roads of this county may be considerably improved, by common attention to the searching for the best materials each district affords ; and to the using them in the summer season. The present practice is more confined to the winter, being a season when the farmers consider themselves most at leisure to prosecute such business, which produces them the least immediate gain.

*Improvements.* There are no societies instituted for the improvement of agriculture. The tenantry, who for the most part are occupiers from year to year, have no incitement to exertions

f skill, they either want a certainty, or security (by of leases), for being reimbursed the expence of any ciments, that might be considered practicable, or n general) are fearful of shewing any inclination to-improvement, lest a speculation should be made them, in an untimely, unqualified, and unjustifiable, e of rent.

only means of exciting a general spirit for improve- would be, by granting leases, under regulations, to the most approved methods of agriculture, which pted with success upon soils of a similar nature, for men of extensive landed property, to shew the way, ertaking the occupancy of parts of their estates under t *practical systems* of Norfolk, Essex, Hertfordshire, and the choicest breeds of cattle and sheep, to be in England, rejecting experiments for a time, or it for the active zeal of Agricultural Societies.

## ON THE USE AND ABUSE OF LEASES.

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THE gentleman of landed property, who should make a resolution not to grant any part of his estate upon a lease, would commit as great an error, as he who grants the whole in that way. There are but few estates, that are so circumstanced, as not to admit of improvement; few on which an occupier of abilities might not lay out a considerable part of his property, for the sake of future advantages to his landlord, as well as himself. On this account it is reasonable, that he should be secured in his expectations as far as human foresight will allow; and this is most effectually done by a lease. Though a gentleman's word may be as binding to him as his bond, his successor is not bound by it; therefore a farmer cannot be expected to lay out his money, which is often the dependence of a family of children, upon the uncertainty of an occupation from year to year. Such gentlemen as are determined not to grant leases at any rate, must be content to let their estates beneath their real value, and neglect many useful improvements, which would tend to their own, the tenants, and the public advantage.

Many gentlemen of this temper, possess a pride in not raising their rents, and esteem all others poor, who attempt to make a fair income of their possessions. The tenants upon such farms, are not found to be richer than those on improved estates, for as they rent the land at half the real value, they are content to exert but half their industry, and consequently jog on in an antediluvian stile. There is

great danger of such estates being reduced in value by interested tenants, on which account leases are unnecessary for the landlord's sake, whilst their farms are considered hereditary possessions, lineally descending from father to son. The trouble or difficulty of agency, under such circumstances, is comparatively small. A superannuated domestic servant may do their business as well as any other person. An advance of rent would give a spur to industry, by setting the whole body of farmers into action.

Where an estate is let according to its fair value, a lease is unnecessary to secure a landlord's interest in the present and future of a tenant's. Where a farmer occupies land from year to year, particularly arable lands, if he is self-interested, industrious, or injudicious, a farm may almost imperceptibly become impoverished before any alarm is taken. Indeed, farms generally fall into the proprietor's hands in the most wretched condition. I have frequently heard gentlemen of landed property complain, that they are considerable losers by farming; and it may reasonably be accounted for, since the land usually comes into their hands in a reduced state, and in that case, let who will be occupied for two or three years rent must be sunk to restore it.

*an annual sum paid by the tenant to the landlord, diminishing the value of his property; and when the value of an estate is reduced, it cannot be called rent, much deducted from the real worth of the possession.* Proprietors of land, do not all of them consider this matter in the proper light, and when they can advance the annual income of their estates, consider it as rent, whilst the property is suffering in an equal proportion to the annual sum received during the demise.

In the course of my experience, I have had applications from people to take farms consisting of arable and pasture, who have set out with a determination not to be bound by what

what I conceived to be the rules of good husbandry, but to do as they pleased with the premises during the intended demise; I always refused to treat upon such terms, well knowing the value of the land must be reduced. But, when such matters have been represented to a principal, who was not a judge in these things, he considered such denial as foregoing his interest, by refusing what appeared to him to be a great rent.

There are particular situations where long leases are unnecessary and improper, especially when farms consist wholly of rich pasture land, which will admit of no improvement, or farms lying near to gentlemen's seats or parks, where a disagreeable neighbour, for a term of years, would be a great inconvenience. Where gentlemen forego their own interest, and that of the community, by not granting leases, by which it may possibly be imagined, such tenants would become independent of their landlords, they are guilty of a gross error, because when leases are properly drawn, it must always be highly to a tenant's prejudice to offend his landlord. Fortuitous circumstances ever produce some indulgence to be solicited from a landlord, even exacting rent on the days it becomes payable, would be an inconvenience, which many tenants could not bear. All farms should be let upon agreements, whether for one or twenty-one years, in a judicious manner, as near as possible for the mutual advantage of landlord and tenant, always preserving the value of the land at least. Wherever agreements or leases are not made with such views, or directed to such ends, it would be better, that no such leases or agreements subsisted. Though the value of the land would be likely to be diminished, yet abuses would not be so speciously practised, as when they are admitted by stipulated terms, reciprocally established between the proprietor and his tenant.

I cannot

cannot take leave of this subject, without recommending to all gentlemen of landed property, as well as to those desirous of hiring farms, to be cautious that farmers do not take more land, than their circumstances will enable them to stock, improve, and manage, to the greatest advantage. Though the ill consequences attending such a course, both to landlord and tenant, are flagrant, yet they are but too frequent; by which procedure, many very able farmers have been ruined, and many estates irreparably brought into disrepute.



## CONCLUSION.

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It is now my design, to conclude these remarks, with some observations, which may not be unworthy the attention of every land-owner, who is desirous of promoting his interest, that of his tenantry, and the community at large; for such interests are compatible, and may be united upon every soil in the kingdom, if the application of it to its right use, is judiciously attended to, as a preliminary step. Let the conduct of those persons, into whose hands the regulating and managing landed property has been committed, be enquired into on the following grounds; viz. whether in the progress of their business as surveyors, or agents, they have considered the property which they have passed over, with a view to what particular purposes it might be most beneficially applied? viz. In duly appropriating arable to be made pasture, and pasture to be made arable, as shall be best adapted respectively to the soils, the interests of landlord, and tenant, and the local circumstances of the country. WHETHER all the advantages which might be derived from the land, are duly estimated? or, whether the practice has not rather been, *to consider the property as to remain in the unimproved state in which they find it*, than in suggesting the application of it to the most profitable modes of agriculture, which, upon similar soils, in the best cultivated parts of the kingdom, have been adopted with success? And should any doubt arise upon this head, it might be a means of drawing a conclusion upon it, from

ing source, if an examination were to be made, from the situation, education, and habits of life, as so employed, there is any possibility of their acquainted with improved practical husbandry? This suggestion appear to be confirmed, it will be, of all possible excuses for their not introduc-

umerate a few points for enquiry, viz.

he making of water-meadows been adopted, or object of experiment or enquiry?

he drill and horse-hoeing husbandry been recom- or introduced, or even attempted to be intro- upon such soils as are best adapted for the use of

he application of oxen, in the cultivation of land, ended to, or recommended, where practicable, in- orses?

he regular distribution of land, and the disposing ouses, in the most central manner, been attended ing inclosed farms, or in laying them out upon ing, and dividing, of common-fields, commons, lands?

he small occupiers been protected, or have not as been laid to those already too large, thereby population in a country already possessing too bitants?

letting of farms, has due attention been paid to ng of proper conveniences for the most profitable occupying the property, and the enforcement tent draining, fencing, and repairing the pre-

enting leases for any term of years, has it been an n any respect, to improve the inheritance of the

lands so leased, or even to stipulate how the incoming tenant, at the end of terms so granted, shall enter upon the respective apportionments of land, in the last year thereof, to keep up the routine of husbandry, (if any mode practised in this county can be so called,) and is not such incoming tenant usually kept out of the whole of the premises until the term is absolutely expired on the 5th of April, or May-day, which in unfavourable seasons, often tends to the loss of a year's crop of corn?

HAS paring and burning been restrained, as a measure highly detrimental upon all light, sandy, or mixed soils?

HAS it been an object to enforce, on the part of the tenantry, the preservation and improvement of timber, underwood, live fences, &c. &c.?

HAVE any stipulations been made with the tenantry upon pasture-land, over-run with ant-hills, rushes, and four unprofitable grafs, to cleanse the same thereof, and afterwards to roll and manure it?

HAVE not rents been raised from time to time, upon occupations from year to year, without either surveyors or agents suggesting any restrictive covenants to improve or preserve the property, and by a general unqualified restriction from ploughing, preventing a single alteration, or improvement, of it? Proceedings, I will be bold to say, directly tending to stifle every symptom of spirit and improvement in the occupiers, who have, from such conduct towards them, just reason to apprehend, that whenever they shall shew any progress towards improvement, (in instances however confined,) the same unskilful conduct will be pursued towards them; and thus, by raising their rents, they will be made to pay a second time for such improvements.

not property in the up-land been constantly alienated, without any searches into the substratums by which neglect the means of improvement, in the, &c. has been overlooked, and, in some instances the most valuable part of the property has been conveyed, without an adequate consideration.

For the duty of every gentleman of landed property to search for, and avail himself of, all the natural advantages which his property is endowed?

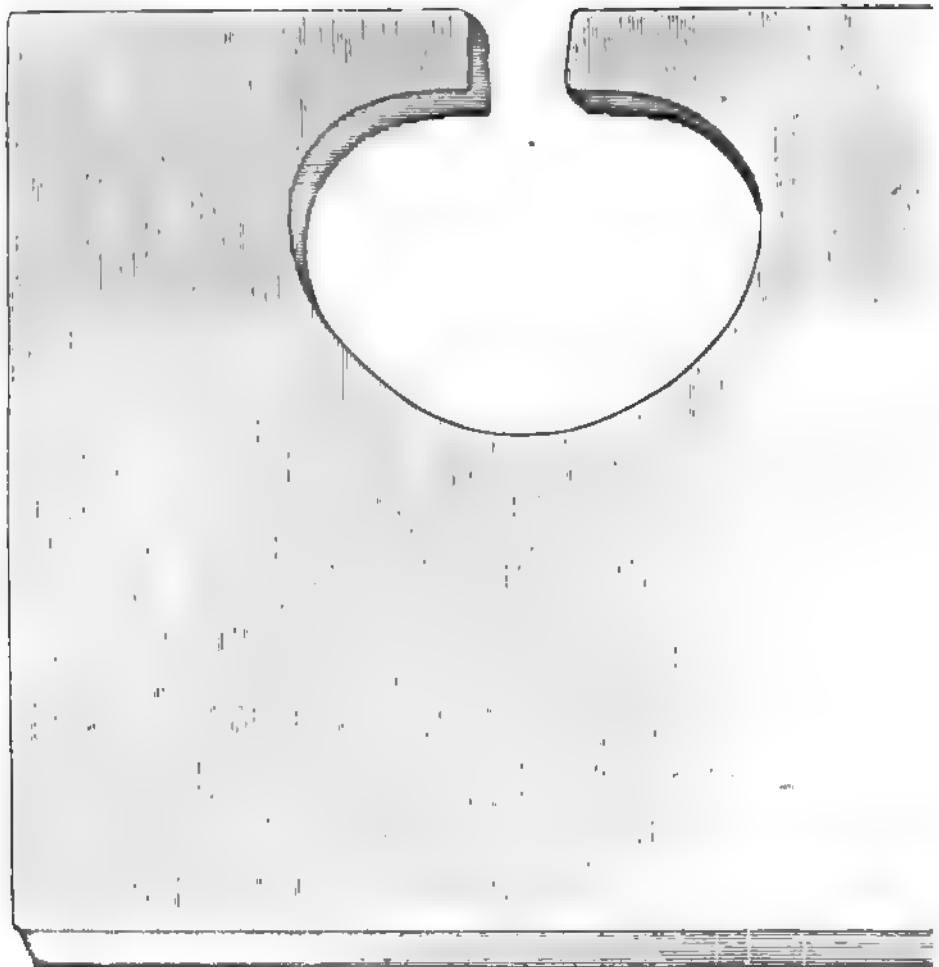
Not every land-owner's duty to improve the agriculture on his estate, that, for the benefit of the community its produce may be made the most abundant it is capable of? Whether he takes a part of the improvement for himself, or allows the whole of it to his tenant, is no public concern.

## A. SHIFTING MUZZLE.

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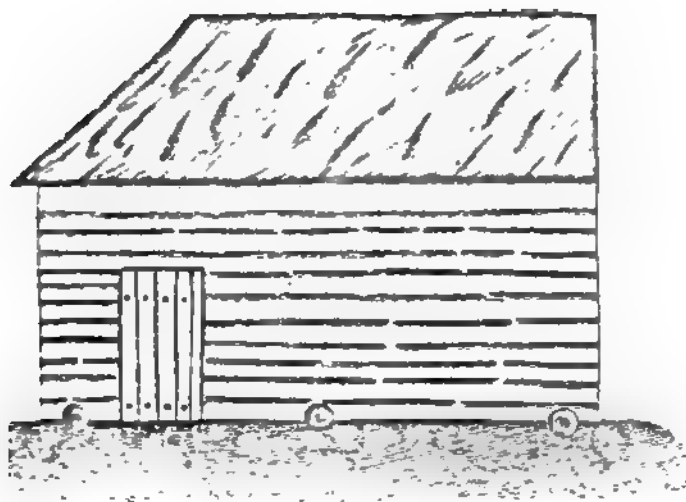
THE common muzzle, which is generally used to prevent calves from sucking cows when they are intended to be weaned (page 22), is riveted full of sharp iron nails or spikes, about  $2\frac{1}{2}$  inches long, but it is a very barbarous practice, and often becomes very injurious to the udders of the cows when the calves attempt to suck them, and by the operation of it, the calves are prevented from grazing; the shifting muzzle evidently appears to answer both intentions in a very superior degree; when the calf lifts up its head with an intention to suck the cow, its muzzle falls upon, and covers, its mouth; and, when it declines its head to graze, no impediment is occasioned by it.

*.4 Shifting Muzzle.*

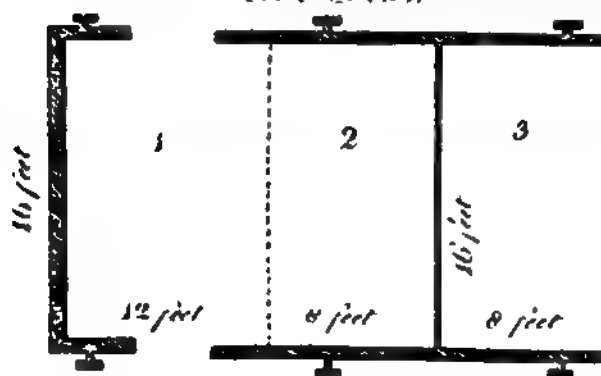


*See Appendix to M. Stone's account of Lincolnshire.*

*The Elevation*



*The Plan*



*SKETCH of H.R. MAJESTY'S BARN at WINDSOR.*

*See H. Smith's account of Lincolnshire, page 6.*

# A P P E N D I X.

*Plan of His MAJESTY's barn at WINDSOR, communicated  
to the STONE, by Sir JOSEPH BANKS, Bart. P. R. S. as pre-  
sented to be of use in Lincolnshire.*

THE floor, 16 feet by 12 feet, boarded, 4 feet high, next the Re-  
ry-bay.

ry-bay, 16 by 8, boarded quite to the top, next No. 3, except a  
g-hole, which secures the barn by a wicket.

er bay, 16 by 8, open at the end, with a view of clasping 8 feet of  
g rick, which is supposed to join it, and to be of a little less scant-  
an the barn; this length of 8 feet is to be cut from the rick and  
n into No. 2, where it is secured, and so drawn on as fast as it can  
ned on the inside.

n is to stand on six wheels of two feet diameter, three on each

riage ever comes into the barn, to bruise the floor, deal answers  
, and there needs only a single door of 4 feet width on each side.

ht of the barn, from the floor to the wall-plate, is 12 feet.

£. s. d.

t Windsor is entirely with deal, and cost by contract,  
all materials of wood, iron, and every thing but

- - - - - 47 5 0

ing, which is always best to be reed, reckoned at

a square, including the roofing, and containing 8

amounts to - - - - - 8 8 0

55 13 0

it more useful, by making it more easy, a wooden

as been added, which may be considered equal to - 7 7 0

Whole expence with a wooden groove £ 63 0 0

PARTI-



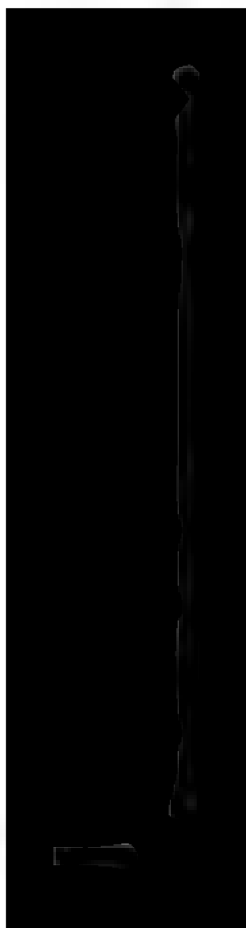
**PARTICULARS OF THE SEVERAL SCANTLINGS.**

The top plate 6 by 5.  
 Bottom ditto 7 by 6.  
 Floor joists 5 by 2½.  
 Under bearers, principal post, 4 by 6.  
 Quarters 4 by 3.  
 Beams 6 by 5.  
 Rafters 3 by 4.  
 Purlins 3 by 2.  
 Braces 3 by 2.  
 Floor 1½.  
 Partition-boards ½.

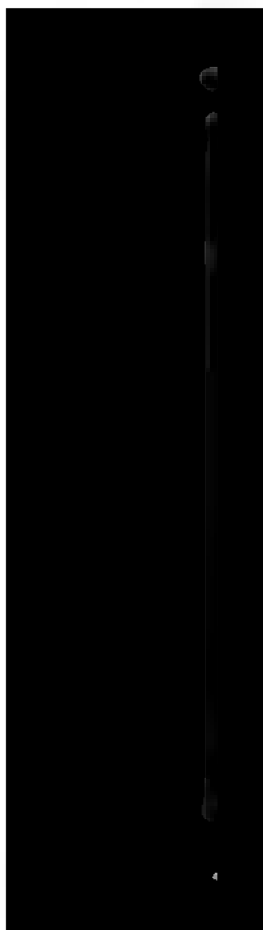
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**E R R A T A.**

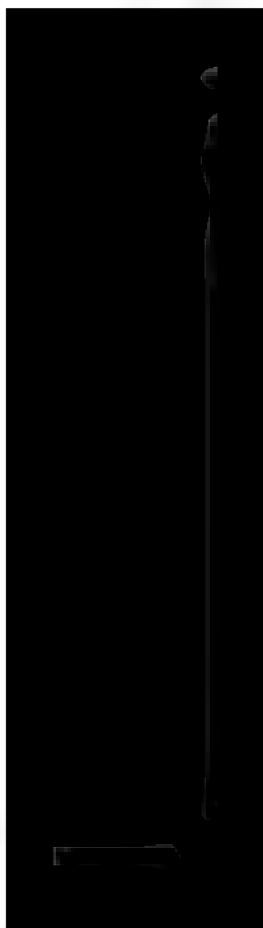
Page 39, note, *not turnips fed off*, read *properly fed off*.  
 41, laid out or distributed, instead of laid down.  
 51, Read *chape*, not *chape*.  
 55, lines 16, 17, comes round again to be sowed with  
 wheat, not sowed with wheat and fallow.



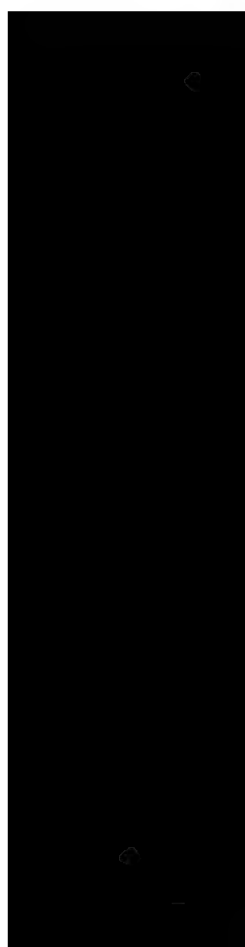














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